

*KY*  
**COUNTY BOROUGH OF ST. HELENS.**



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36TH

# **ANNUAL REPORT**

OF THE

## **Medical Officer of Health.**

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*1908.*

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**St. Helens:**

WESTWORTH & SONS, PRINTERS AND STATIONERS, LOWE STREET.

—  
1909.

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COUNCILLOR J. A. COLLINS, J.P.

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COUNCILLOR R. ELLISON.

COUNCILLOR J. FISHER.

COUNCILLOR H. H. PLEET.

COUNCILLOR J. PHYTHIAN.

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COUNCILLOR R. B. DAVIDSON.

# — STAFF.

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*Medical Officer of Health, Public Analyst and Medical Officer of the Education Committee :—*

JOHN J. BUCHAN, M.D., D.P.H.

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*Assistant Medical Officer :—*

FRANCES M. HARPER, M.B., D.P.H. (to January, 1909).

JAMES J. PATERSON, M.B., D.P.H. (from January, 1909).

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*Chief Inspector of Nuisances, Building Inspector, and Inspector under the Food and Drugs Acts :—*

W. JAS. MILLIGAN.

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*District Inspectors :—*

EDWARD HOUGHTON.	Hardshaw, North and South Windle Wards.
H. BROWN.	Central, North and South Eccleston Wards.
H. LOWE.	Parr, East and West Sutton Wards.
J. ALMOND.	Factory and Workshop, and Drainage Inspector.

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*Superintendent of the Public Abattoir :—*

W. H. GOODMAN.

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*Health Visitors :—*

MISS HARTLEY. School Nurse.

MISS WRIGHT. , ,

MISS SPENCER. Infant Hygiene.

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*Head Clerk :—*

ROBERT H. JACKSON.

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Two Disinfectors, two Hospital Porters, one Laboratory Assistant,  
and two Junior Clerks.

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*Matron of the Infectious Diseases Hospitals :—*

MISS M. BURGESS

TO THE CHAIRMAN AND MEMBERS  
OF THE HEALTH COMMITTEE.

GENTLEMEN,

I have the honour to present to you the Annual Report on the Health of the Borough for the year 1908.

The report is, this year, divided into four parts, dealing with Vital Statistics, Records of Disease, General Sanitary Administration, and School Hygiene. The fourth part is also issued separately to the Education Committee, and forms the annual report required by the Regulations of the Board of Education.

The birth rate was 35.29 of the population, an increase of 1.1 per 1,000 over that of last year. The birth rate, therefore, remains high.

The death rate was 16.0 per 1000 of the population, a decrease of 2.3 per 1,000. The zymotic death rate or death rate from infectious disease, was 1.32 per 1,000 of the population, a decrease of 1.55 per 1000. The Infantile Mortality Rate was 122 per 1000 children born, a decrease of 33 per 1,000 from that of last year.

In the matter of death rates therefore, the year 1908 was a record one for the town ; the general death rate being 1.2 per 1,000, the zymotic death-rate 0.40 per 1,000, of the population better, and the infantile mortality rate was 10 per 1,000 births better than any previous year. While all these reductions are notable that in the infantile mortality rate is especially satisfactory on account of the great difficulty and intricacy of the problems which arise in municipal work for the preservation of infant life.

The death rate from pulmonary tuberculosis was 1.20 per 1,000 of the population, which is 0.10 per 1,000 greater than last year, but a low rate compared with that recorded in previous years.

The Notification of Births Act was adopted and came into force during the year, and special reference to it is made in this report.

It gives me great pleasure to report the excellent work done by the Staff of the Health Department during the year, and I should like specially to mention the work of Dr. Frances M. Harper, who is now on the School Medical Staff of the Lancashire County Council.

I have also to acknowledge with thanks the kindness and assistance which I have received on all occasions from the Chairman and Members of the Committee.

I am,

Gentlemen,

Your obedient servant,

JOHN J. BUCHAN,

MEDICAL OFFICER OF HEALTH.

MEDICAL OFFICER'S DEPARTMENT,

TOWN HALL, ST. HELENS.

*30th April, 1909.*

I.

# *Vital Statistics.*

## **SUMMARY FOR 1908.**

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**POPULATION**—Estimated to the middle of the year—

Males ...	48596	}	Total ...	93,812
Females ...	45216			
Increase during the year ...	... ...		...	1,336

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**MARRIAGES** ... ... ... ... ... ... ... ... 579

Annual Rate of Persons Married per 1000 of the Population ... 12·3

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**BIRTHS** ... ... Males ... 1691 } Total ... 3311  
Females ... 1620 }

Annual Rate of Births per 1000 of Population ... ... ... 35·29

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**DEATHS** ... ... Males ... 780 } Total ... 1507  
Females ... 727 }

Annual Rate of Mortality per 1000 ... (Males ... 16·0)  
(Females ... 16·0) Total ... 16·0

Total Deaths from Zymotic Diseases ... ... ... ... 124

Annual Rate of Mortality from Zymotic Diseases ... ... ... 1·32

Infantile Mortality Rate, 1908 ... ... ... ... 122

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Area of Borough ... ... ... ... ... ... 7,285 acres.

Highest altitude—at Brown Edge ... 268 ft. above ordnance datum.

Lowest altitude—at Blackbrook ... ... 75 ft. above ordnance datum.

## **POPULATION.**

The population of the Borough at the middle of 1908, calculated upon the census returns, was 93,812, being an increase of 1,336 over that of last year. The population at the Census of 1901 was 84,410, and at the census of 1891, 72,413.

The number of inhabited houses at the end of last year was found to be 18,638, an increase of 102 houses during the year. This gives an inhabited house rate of 5·03 persons per house.

The average density of population is 12·8 persons to the acre; the density varies in different wards from 4·4 in West Sutton to 134·5 in South Windle. This is seen in the following table:—

DISTRIBUTION AND DENSITY OF POPULATION.

WARDS.	Population Census 1901.	Population estimated to June 30, 1908.	Area of each Ward, in Acres.	Persons per Acre, 1908.
Eccleston, North ...	10551	11868	235·439	50·5
Eccleston, South ...	8835	10219	621·625	16·4
Central ...	7235	7621	94·459	81·1
Windle, North ...	11475	12937	697·084	18·5
Windle, South ...	8315	9013	67·116	134·5
Hardshaw ...	9690	10655	342·684	31·1
Sutton, East ...	8771	9595	1312·319	7·3
Sutton, West ...	9524*	10686 <sup>b</sup>	2429·151	4·4
Parr ...	10014	11224	1484·550	7·5
Whole Borough ...	84410	93812	7284·427	12·8

\* Including Rainhill Asylum.

The number of persons living at each age is seen on page 94, Table VI. The high relative proportion of children and young persons in St. Helens will be noted, 14·3 per cent. of the whole population being under five years of age as compared with 11·4 per cent. in the country generally. This fact is of great importance in considering the vital statistics of the Borough, and accounts for the greater prevalence of children's diseases and their greater effect on the general mortality rate.

**Increase of Population.**—The increase in the population of 1908 over that of 1907 is 1,336. The natural increase for the year under con-

sideration, or the excess of the number of births over that of the deaths is 1,804. So that during the year 1908 there was a nett emigration from St. Helens of 468 persons.

## BIRTHS.

The number of Births registered during 1908 was 3,311. The birth rate, therefore, is 35·29 per 1,000 of the population. The number of births in 1908 is 156 more than that registered in 1907.

### BIRTHS AND BIRTH RATES FROM 1898.

YEAR.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Totals.	Rate per 1000 per year.
1898 .....	896	776	767	823	3262	38·4
1899 .....	802	762	763	788	3115	35·9
1900 ... ....	886	743	768	701	3098	35·0
1901 .. ....	815	765	792	756	3128	36·9
1902 .. ....	848	798	801	775	3222	37·4
1903 .. ....	819	845	819	938	3421	39·1
1904 .. ....	824	848	788	861	3321	37·4
1905 .. ....	872	789	815	763	3239	36·0
1906 .. ....	784	776	757	774	3091	33·9
1907 .. ....	869	796	759	731	3155	34·1
Mean of } 10 years ...	841	789	782	791	3205	36·4
1908 { Males...	429	434	416	412	1691	35·29
{ Females	444	366	409	401	1620	
Total ...	873	800	825	813	3311	
Rate per 1000	37·2	34·1	35·1	34·6		

It will be observed that during 1908, as in 1907, the highest birth-rate was registered in the 1st Quarter.

In twenty cases prospective mothers went into the Workhouse, which is situated without the boundary of the Borough, to be confined, and returned with their infants to St. Helens afterwards. If these births be added the birth-rate for 1908 would become 35·5 per thousand.

The birth-rate in St. Helens is much above that of England and Wales ; of the great towns only Rhondda, Middlesborough, Merthyr Tydfil, and Coventry have a higher rate in 1908. (See Table B on pages 20 and 21). The birth-rate for 1908 is, nevertheless, a low one for St. Helens (see Table A, on page 19).

#### BIRTH RATE PER 1,000 IN PREVIOUS YEARS.

YEAR.	BIRTH RATES.		
	England and Wales.	Great Towns.	St. Helens.
1891—1900	29·9	30·9	38·2
1901	28·5	30·0	36·9
1902	28·6	30·0	37·4
1903	28·4	27·4	39·1
1904	27·9	29·0	37·4
1905	27·2	28·2	36·0
1906	27·0	27·9	33·9
1907	26·3	27·0	34·1
1908	26·5	27·0	35·2

It will be seen, therefore, that the birth-rate during 1908 in England and Wales was 3·4, in the Great Towns 3·9, and in St. Helens 3·0 per 1,000 below the average for the ten years 1891—1900.

In St. Helens the proportion of women at child-bearing ages is relatively small. At the census of 1901 of the total population of England and Wales, 25·0 per cent. were women at child-bearing ages, whereas in St. Helens only 21·9 per cent. of the population were women at these ages. If the proportion had been the same in St. Helens as in England and Wales the birth-rate in St. Helens for 1908 would have been 40·1 per 1,000 instead of 35·2.

A similar correction requires to be made in comparing the local birth-rates in the Wards of the Borough.

## BIRTH-RATE IN EACH WARD.

Ward.	Number of Births.	Birth Rate per 1000.	Proportion of Women at Child-bearing Ages.	Corrected Birth Rate.
North Eccleston	489	41·2	21·2	48·5
South Eccleston	435	42·6	22·9	46·5
Central	179	23·4	21·4	27·3
North Windle	302	23·3	23·9	24·3
South Windle	276	30·6	22·3	34·3
Hardshaw	397	37·2	22·5	41·2
East Sutton	399	41·5	20·6	50·3
West Sutton	324	30·3	21·9	34·5
Parr	510	45·4	19·9	57·0

The outstanding feature in this Table is the very high birth-rate in Parr—a peculiarity which has been noted for several years. Equally characteristic is the low birth-rate in North Windle and Central Wards.

As compared with the previous year an increase in the birth-rate is to be noted in North and South Eccleston, Central, East and West Sutton, and Parr Wards, while a fall is seen in North and South Windle and Hardshaw Wards.

Of the 3,311 children born in 1908, 1,691 were males and 1,620 females,—a proportion of 100 males to 95·8 females.

**Illegitimacy.**—Of the 3,311 births registered during 1908, 80 were illegitimate. This is in the proportion of 975·8 legitimate and 24·2 illegitimate births in every 1,000. The rate is 3·3 per 1,000 below that of last year.

The following table shows the proportional amount of illegitimacy per 1,000 births in past years:—

Year.	Legitimate.	Illegitimate.
1899	978	22
1900	978	22
1901	976	24
1902	977	23
1903	978	22
1904	977	23
1905	979	21
1906	977	23
1907	972·5	27·5
1908	975·8	24·2

In St. Helens 66·7 per cent. of the women over 20 years are married and only 33·3 per cent. single or widowed, whereas in Lancashire generally in 1901 only 56·8 per cent. of the women over 20 years were married and 43·2 per cent. single or widowed. The high proportion of married women in the community reduces the illegitimacy rate.

## **DEATHS.**

The deaths of 1,436 persons took place during 1908 within the Borough of St. Helens. Of these 733 were males and 703 females.

For comparative purposes certain corrections for deaths in Public Institutions have to be applied as follows :—

### **DEATHS IN PUBLIC INSTITUTIONS.**

(a) *In the Borough of St. Helens.* The following deaths of persons not belonging to St. Helens occurred within the Borough.

Name of Institution.	Total Deaths.	Deaths of Persons from outside the Borough.
County Asylum (old) ...	82	78
Providence Hospital ...	63	5
Borough Sanatorium ...	58	3
St. Helens Hospital ...	78	2
Total ...	281	88

There thus occurred in Public Institutions within the Borough the deaths of 88 persons who resided outside, and these deaths have to be deducted from the 1,436 deaths.

(b) *Outside the Borough of St. Helens.* The following deaths of persons belonging to St. Helens occurred in Public Institutions outside the Borough : Whiston Workhouse, 145 ; County Asylum (Annexe), 6 ; Liverpool Hospitals, 7 ; County Asylum, Lancaster, 1 ; total, 159. There thus falls to be added the deaths of 159 persons whose residence was in St. Helens, but whose death occurred outside the Borough.

The total number of deaths is therefore 1,507, giving a death-rate of 16·06 per thousand of the population. This rate is the lowest that has ever been recorded in St. Helens, it is 2·3 per 1,000 below the rate in the preceding year, and 5·1 per 1,000 below the mean rate for the years 1891—1900. In England and Wales the death-rate for 1908 was 14·7 per 1,000, being 0·3

below the rate for 1907 and 3·5 below the mean rate for the years 1891—1900, while in the Great Towns the death-rate for 1908 was 14·9 per 1,000, being 0·5 below the rate for 1907, and 5·1 below the mean rate for the years 1891—1900.

DEATH RATE PER 1,000 IN PREVIOUS YEARS.

YEAR.	DEATH RATES.		
	England and Wales.	Great Towns.	St. Helens.
1891—1900	18·2	20·0	21·1
1901	16·9	18·6	19·7
1902	16·2	17·4	19·7
1903	15·4	17·2	17·5
1904	16·2	17·2	20·9
1905	15·2	15·7	17·2
1906	15·4	15·9	17·3
1907	15·0	15·4	18·3
1908	14·7	14·9	16·0

In making a comparison between these death-rates it is necessary to allow for the difference in the age and sex constitution of the populations. This, as explained in previous reports, may be done by multiplying the death rate of St. Helens by a "factor of correction," allowing for this difference. The Registrar-General gives this factor as 1·0839, which, when applied, gives a corrected death-rate of 17·4 per 1,000 in St. Helens. The comparative mortality figure for 1908 is therefore 1,183; this means that a population living in England and Wales generally, which in 1908 would have given 1,000 deaths, would, if living only in St. Helens, have given 1,183 deaths.

The death-rate for the past thirty years is seen on Table A, page 19, and is shown graphically on Chart No. 2. The rate during this period has been continuously falling, but the improvement has been especially marked during the past 15 years; for the years 1879 to 1893 inclusive, the average death-rate was 23·1 per 1,000, while for the years 1894 to 1908 inclusive, the average death-rate has been 19·1 per 1,000.

On pages 20 and 21 will be found the death-rates for the other great towns in England and Wales during 1908, where it will be seen that 24 towns have a higher death-rate than St. Helens last year.

## COMPARATIVE DEATH RATES IN THE DIFFERENT WARDS IN 1908.

WARDS.	Death-rate.	Factor of Correction.	Corrected Death Rate.	Comparative Mortality figure.
North Eccleston	14·1	1·0556	14·8	1006
South Eccleston	16·9	1·0737	18·1	1231
Central ...	14·7	1·1331	16·6	1129
North Windle ...	11·5	1·1310	13·0	884
South Windle ...	14·5	1·0957	15·8	1074
Hardshaw ...	16·3	1·1009	17·9	1217
Sutton, East ...	15·7	1·0693	16·7	1136
Sutton, West ...	11·2	1·0630	11·9	809
Parr ...	15·1	1·0489	15·8	1074

These rates have decreased in 1908 in all the Wards with the exception of Central, where it shows a slight increase.

The death-rate in the first quarter of the year was 17·9, in the second 14·0, in the third 15·0, and in the fourth quarter 17·2 per 1,000 ; the rate was therefore greater in the first quarter of the year than in the others.

The death-rate among the male population was 16·0 per 1,000, and among the female 16·0 ;

## DEATHS FROM THE PRINCIPAL DISEASE GROUPS.

	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Infectious Diseases, etc. ..	292	282	329	353	244	176	377	207	199	301	162
Constitutional diseases .. ..	219	222	264	209	265	232	253	230	271	249	269
Developmental ,,, .. ..	114	99	125	123	143	125	139	163	176	205	235
Diseases of Nervous System ..	210	217	237	181	211	211	165	164	184	165	194
,, ,,, Respiratory ,,	332	379	439	326	142	364	370	326	284	372	295
,, ,,, Circulatory ,,	73	90	100	94	82	89	106	110	108	100	110
,, ,,, Digestive ,,	154	157	176	192	135	113	167	139	159	152	114
Other local diseases ..	43	52	54	54	55	67	48	69	60	61	54
Deaths from violence .. ..	56	55	52	65	56	68	50	62	54	57	43
Ill-defined diseases .. ..	148	147	138	150	109	90	113	72	82	33	31
All causes .. ..	1641	1700	1914	1675	1702	1535	1788	1542	1577	1701	1507

This Table shows that the improvement in the death-rate last year has been due to the decrease in the number of deaths arising from infectious, respiratory, and digestive diseases. A small increase in the number of deaths from nervous and developmental diseases is noted.

**Mortality at Different Ages.**—The death rates in each age group during the past six years are seen in the following table, in which will be noted the decrease in the death-rate last year at all ages under ten years.

AGES.	Death Rate per 1,000 of the Population in each age Group.					
	1903	1904	1905	1906	1907	1908
Under 1 year ...	175·7	210·4	154·7	176·1	173·9	139·5
1 to 2 years ...	53·6	97·1	63·4	59·4	82·5	49·1
2 „ 3 „ ...	21·1	37·9	27·9	15·5	32·2	15·8
3 „ 4 „ ...	13·1	23·7	13·5	10·9	18·9	11·4
4 „ 5 „ ...	8·7	12·6	10·1	6·3	10·6	5·8
5 „ 10 „ ...	5·9	4·2	4·1	4·0	4·4	3·6
10 „ 15 „ ...	2·5	2·6	2·2	3·2	2·3	2·6
15 „ 20 „ ...	3·4	3·2	3·7	4·0	2·9	2·8
20 „ 25 „ ...	3·3	3·8	4·8	4·3	4·4	4·4
25 „ 35 „ ...	6·8	5·1	6·3	5·2	4·9	5·0
35 „ 45 „ ...	10·5	10·4	9·5	9·8	9·2	10·1
45 „ 55 „ ...	20·9	18·3	18·0	18·1	19·3	18·1
55 „ 65 „ ...	37·6	35·0	35·0	36·2	38·5	41·6
65 „ 75 „ ...	69·9	77·6	84·9	87·7	90·9	88·9
75 „ 85 „ ...	160·7	165·7	172·3	195·3	125·3	231·1
Upwards of 85 years.	312·5	312·5	218·7	281·2	281·2	125·0
All under 5 years ...	57·0	79·3	56·2	56·0	65·8	46·3
All over 5 years ...	10·9	10·2	10·6	10·8	10·4	11·0
All ages ...	17·5	20·9	17·1	17·3	18·3	16·0

The mortality rate between one and sixty years of age in St. Helens in 1908 was 8·54 per 1,000, as against 10·77 in 1907; over 60 years the rate

was 81.57 per 1,000, as against 74.55 in 1907. In England and Wales in 1908 the rate between one and sixty years was 7.2, and over 60 years 67.9 per 1,000.

**Infantile Mortality Rate.**—There were 404 deaths of children under one year of age, which is in the proportion of 122 deaths in every 1,000 children born, as compared with 155 in the preceding year.

#### COMPARATIVE INFANTILE MORTALITY RATES.

	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
St. Helens ...	172	157	188	175	167	138	174	132	159	155	122
Great Towns ..	178	182	172	168	144	144	160	140	155	127	128
England & Wales	160	163	154	151	133	132	146	128	133	118	121

This rate is 33 per 1,000 below that of the previous year and 39 per 1,000 below the mean for the past ten years. This is the lowest rate ever recorded in St. Helens, being 10 per 1,000 less than the previous best in 1905. In England and Wales and in other great towns generally, the infantile mortality rates in 1908 were 121 and 128 per 1,000 births respectively, so that the relative position of a town with the high birth-rate of St. Helens is very good.

#### INFANTILE MORTALITY RATE IN EACH WARD.

WARD.	Number of Births.	Number of deaths under 1 year.	1908 Rate.	1907 Rate.
North Eccleston ...	489	46	94	163
South Eccleston ...	435	50	115	135
Central ... ...	179	21	117	174
North Windle ...	302	38	125	110
South Windle ...	276	41	148	149
Hardshaw ... ...	397	53	133	158
East Sutton ...	399	46	115	166
West Sutton ...	324	37	114	171
Parr ... ...	510	72	141	160

The rate was lowest in North Eccleston and highest in South Windle. In North and South Eccleston, East and West Sutton and Central Wards the infantile mortality rate was satisfactorily low, but in North and South

Windle, Hardshaw and Parr Wards, the rate was high. In all the Wards with the exception of North Windle, this rate has decreased in 1908. The causes of death of infants under one year of age during the past three years are seen in the following table, which shows that in Groups I. and V. the number has greatly decreased, while in the other groups the number has increased. The decreased mortality in the first two mentioned groups has arisen from the fact that fewer deaths have occurred from measles, whooping cough, and bronchitis.

DEATHS OF INFANTS UNDER ONE YEAR, 1906-8.

	CAUSE OF DEATH.	1906	1907	1908
I.— Common Infectious Diseases.	Small-pox .. ..	—	—	—
	Chicken-pox .. ..	—	—	—
	Measles .. ..	2	25	—
	Scarlet Fever .. ..	—	1	1
	Diphtheria (including } Membranous Croup }	—	1	2
	Whooping Cough .. ..	3	19	2
II.— Diarrhoeal Diseases.	Diarrhoea, all forms ..	59	16	36
	Enteritis, Muco-enteritis } Gastro-enteritis }	25	18	21
	Gastritis, Gastro- intestinal Catarrh }	43	28	16
	Premature Birth .. ..	75	74	119
III.— Wasting Diseases.	Congenital Defects .. ..	10	11	17
	Injury at Birth .. ..	3	1	—
	Want of Breast-milk, Starvation }	2	—	—
	Atrophy, Debility, Marasmus }	64	75	23
IV. Tuberculous Diseases.	Tuberculous Meningitis ..	5	7	6
	Tuberculous Peritonitis : } Tabes Mesenterica }	24	6	19
	Other Tuberculous Diseases }	9	6	1
	Erysipelas .. ..	—	1	1
V.— Other causes.	Syphilis .. ..	4	1	5
	Rickets .. ..	—	1	1
	Meningitis ( <i>not</i> Tuberculous)	8	14	13
	Convulsions .. ..	55	57	34
	Bronchitis .. ..	26	84	31
	Laryngitis .. ..	—	1	2
	Pneumonia .. ..	28	28	27
	Suffocation, overlying ..	3	2	—
	Other Causes .. ..	45	14	—
Total .. ..		493	491	404

The ages at death of infants under one year, and the wards in which these deaths occurred, are shown in Table V. and Va. in Appendix B. The measures taken to prevent an excessive death rate in infancy are described on pages 70 to 76.

Table A.—Vital and Mortal Statistics for St. Helens during 30 years.

YEARS.	Population.	Birth Rate.	Death Rate.	Zymotic Death Rate.	Small Pox.	DEATHS FROM							
						Measles.	Scarlet Fever	Typhoid and Continued Fever.	Typhus Fever.	Diarrhoea.	Whooping Cough.	Diphtheria.	
1879	55010	41.13	22.40	5.7	C	143	83	34	2	52	2	3	
1880	56340	41.56	20.05	4.6	O	0	27	40	2	130	71	1	
1881	57711	43.52	21.69	2.92	C	14	28	56	0	76	3	3	
1882	58972	43.70	25.46	7.4	C	250	36	33	1	85	36	6	
1883	60263	40.69	21.65	2.5	C	3	14	31	1	69	24	11	
1884	61584	42.50	24.16	5.3	C	131	16	33	2	131	9	11	
1885	62932	39.93	23.32	3.5	O	81	13	7	1	56	53	11	
1886	64311	40.70	22.46	5.2	C	102	31	28	0	122	41	10	
1887	65718	37.00	21.69	3.9	O	53	35	34	0	101	28	11	
1888	67158	39.20	19.80	3.1	O	38	11	22	0	65	61	21	
1889	68628	39.86	23.50	4.18	O	78	3	81	1	85	15	29	
1890	70132	38.90	25.43	5.3	O	19	181	24	1	74	68	13	
1891	71666	40.70	26.02	3.0	O	54	24	26	0	78	29	9	
1892	73240	39.77	20.55	2.64	I	23	18	25	0	84	31	12	
1893	75370	40.10	23.46	5.3	I	5	135	6	52	0	168	19	16
1894	*77690	37.09	18.02	2.21	O	21	14	26	2	38	61	10	
1895	79400	39.8	21.08	3.08	I	54	9	59	0	101	14	8	
1896	81136	37.49	20.24	3.63	O	38	59	40	0	63	78	17	
1897	82910	38.51	21.0	4.22	O	87	44	33	0	133	33	20	
1898	84730	38.49	19.3	3.09	O	17	24	30	0	140	34	16	
1899	86588	35.97	19.6	2.74	C	21	8	43	0	114	41	15	
1900	88480	35.0	21.6	3.04	O	59	25	19	0	91	56	19	
1901	84734	36.9	19.7	2.56	O	7	29	34	0	95	17	3	
1902	86040	37.4	19.7	2.60	O	59	52	25	0	50	18	20	
1903	87385	39.1	17.5	1.72	O	1	26	18	0	53	30	23	
1904	88722	37.4	20.9	3.96	I	131	17	13	0	120	49	22	
1905	89843	36.05	17.2	1.88	O	41	16	2	0	66	26	18	
1906	91153	33.9	17.3	1.79	O	10	4	18	0	105	5	22	
1907	92476	34.1	18.3	2.87	O	145	10	12	0	36	52	11	
1908	93812	35.2	16.0	1.32	O	0	29	12	0	59	7	17	

\* Borough extended

**TABLE B.**

TABLE SHOWING COMPARATIVE STATISTICS BETWEEN  
ST. HELENS AND THE 75 OTHER GREAT TOWNS DURING 1908.

TOWN.	Population	Birth Rate per 1000	Death Rate per 1000	Infantile Rate per 1000 Births	Zymotic Rate per 1000
76 Great Towns ..	16,234,952	27·0	14·9	128	1·58
London .. ..	4,795,757	25·4	13·8	113	1·35
Croydon .. ..	157,698	25·4	12·7	101	1·38
Willesden .. ..	154,792	26·1	10·5	99	1·00
Hornsey .. ..	92,713	16·1	8·3	62	.58
Tottenham .. ..	126,146	30·2	12·4	71	1·21
West Ham .. ..	315,000	28·8	13·8	128	2·38
East Ham .. ..	142,976	24·8	10·3	110	1·27
Leyton .. ..	125,815	25·8	10·4	77	.82
Walthamstow .. ..	131,486	26·2	10·5	106	.98
Hastings .. ..	67,817	15·5	11·7	81	.41
Brighton .. ..	129,967	21·3	14·7	104	.63
Portsmouth .. ..	211,493	28·4	13·7	98	.96
Bournemouth .. ..	70,801	17·1	12·8	83	.71
Southampton .. ..	122,196	26·4	12·9	113	1·17
Reading .. ..	81,647	22·7	11·8	100	1·36
Northampton .. ..	96,405	20·9	11·5	97	.72
Ipswich .. ..	73,852	24·5	14·3	107	.89
Great Yarmouth .. ..	53,152	26·6	15·0	125	.94
Norwich .. ..	122,841	25·3	14·1	115	1·13
Plymouth .. ..	122,113	22·2	15·0	129	.91
Devonport .. ..	81,525	25·4	13·3	125	1·22
Bristol .. ..	372,785	23·1	13·5	151	1·15
Hanley .. ..	67,998	33·0	18·5	106	1·99
Burton-on-Trent .. ..	53,936	22·1	12·7	112	1·06
Wolverhampton .. ..	103,318	25·8	19·3	132	1·21
Walsall .. ..	97,778	29·6	14·9	147	2·07
Handsworth (Staffs) .. ..	68,051	23·0	10·7	86	.86
West Bromwich .. ..	69,786	32·4	16·1	138	1·81
Birmingham .. ..	558,357	25·9	15·9	145	1·86
Kings Norton .. ..	78,608	24·8	10·4	85	.86
Smethwick .. ..	68,416	30·9	13·4	134	1·53
Aston Manor .. ..	84,256	26·2	12·5	127	1·89
Coventry .. ..	78,889	35·4	15·4	96	1·10
Leicester .. ..	240,172	23·4	12·9	132	1·50
Grimsby .. ..	71,800	31·7	14·4	140	1·44
Nottingham .. ..	260,449	26·6	15·2	146	1·24
Derby .. ..	127,583	25·9	13·0	112	9·3

**TABLE B** (Continued)

TOWN.		Population	Birth Rate per 1000	Death Rate per 1000	Infantile Rate per 1000 Births	Zymotic Rate per 1000
Stockport	..	102,339	27.8	18.2	168	2.44
Birkenhead	..	119,830	31.5	15.8	136	1.90
Wallasey	..	68,849	25.2	13.6	102	1.52
Liverpool	..	753,203	31.8	19.2	169	2.20
Bootle	..	68,248	31.3	18.2	147	2.51
Wigan	..	89,636	32.8	18.0	156	1.85
Warrington	..	71,268	32.7	17.0	134	2.41
Bolton	..	185,358	24.5	15.5	149	1.69
Bury	..	59,064	23.0	15.8	130	1.21
Manchester	..	649,251	29.2	18.2	151	2.26
Salford	..	239,294	29.6	17.8	153	3.04
Oldham	..	142,507	28.0	19.8	160	2.50
Rochdale	..	88,821	24.6	18.4	169	2.17
Burnley	..	105,100	28.2	17.9	201	2.83
Blackburn	..	135,961	25.1	15.6	135	1.54
Preston	..	117,799	27.7	17.9	154	2.23
Barrow-in-Furness	..	62,312	29.9	13.1	111	1.08
Huddersfield	..	94,776	24.4	17.0	111	1.57
Halifax	..	111,018	19.0	14.1	101	1.01
Bradford	..	292,136	20.2	15.5	143	1.37
Leeds	..	477,107	24.8	15.3	138	1.51
Sheffield	..	463,222	30.7	15.8	140	1.83
Rotherham	..	63,736	32.8	15.9	148	2.82
York	..	85,861	25.1	12.6	106	1.14
Hull	..	271,137	30.3	16.1	145	2.19
Middlesbrough	..	103,511	35.9	19.7	159	3.42
Stockton-on-Tees	..	53,160	31.6	17.9	153	2.71
West Hartlepool	..	77,573	26.4	11.9	114	.72
Sunderland	..	157,693	33.0	17.7	147	1.85
South Shields	..	115,535	30.1	15.4	134	1.67
Gateshead	..	128,393	30.9	14.9	149	1.90
Newcastle-on-Tyne	..	277,257	29.8	15.9	137	1.26
Tynemouth	..	55,244	34.3	17.5	137	1.59
Newport (Mon.)	..	76,955	32.7	16.2	133	1.29
Cardiff	..	191,446	26.6	12.9	126	1.10
Rhondda	..	133,137	40.3	18.4	184	3.26
Merthyr Tydfil	..	77,219	35.6	19.1	179	2.51
Swansea	..	97,810	33.1	18.6	152	1.60
<b>St. Helens</b>	..	93,812	35.2	16.0	122	1.32

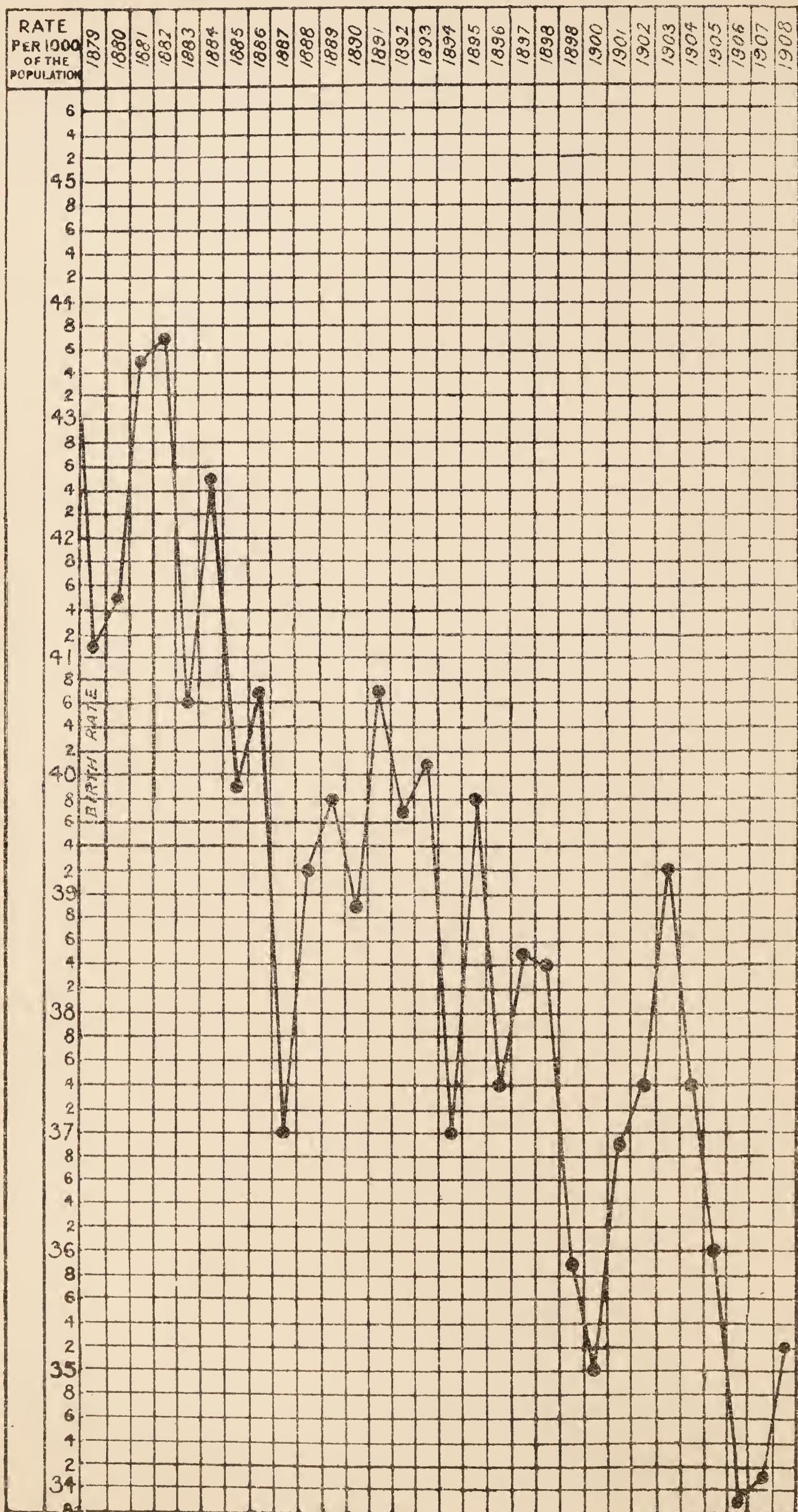
TABLE C.

1908.		Deaths from all causes.	Annual Rate per 1000.	Deaths from seven principal Zymotics.	Annual Rate per 1000, for Zymotics.	Births.	Annual Rate per 1000.
Week ending January	4	20	11·0	2	1·1	74	41·3
" "	11	30	16·6	3	1·6	81	45·3
" "	18	27	14·9	0	·0	76	42·5
" "	25	22	12·1	1	·5	53	29·5
" February	1	39	21·7	3	1·6	55	30·7
" "	8	36	20·0	2	1·1	68	38·0
" "	15	39	21·7	0	·0	66	36·8
" "	22	33	18·3	1	·5	68	37·8
" "	29	25	13·8	0	·0	48	26·7
" March	7	27	14·9	0	·0	85	47·5
" "	14	31	17·2	0	·0	60	33·5
" "	21	42	23·4	1	·5	74	41·3
" "	28	25	13·8	1	·5	65	36·3
" April	4	31	17·2	2	1·1	46	25·6
" "	11	28	15·5	1	·5	67	37·4
" "	18	21	11·6	0	·0	55	30·7
" "	25	22	12·1	1	·5	39	21·7
" May	2	20	11·0	0	·0	59	32·9
" "	9	28	15·5	1	·5	86	48·1
" "	16	19	10·4	0	·0	52	29·0
" "	23	27	15·0	3	1·6	78	43·6
" "	30	25	13·8	0	·0	58	32·3
" June	6	21	11·6	0	·0	69	38·5
" "	13	14	7·7	1	·5	54	30·1
" "	20	20	11·0	0	·0	77	43·0
" "	27	34	18·9	2	1·1	60	33·5
" July	4	15	8·2	1	·5	69	38·5
" "	11	20	11·0	2	1·1	53	29·5
" "	18	23	12·7	4	2·2	77	43·0
" "	25	21	13·2	4	2·2	48	26·7
" August	1	22	12·1	4	2·2	57	31·8
" "	8	35	19·4	5	2·7	57	31·8
" "	15	29	16·0	9	4·9	87	48·6
" "	22	26	14·4	5	2·7	72	40·2
" "	29	28	15·5	8	4·4	78	43·6
" September	5	27	14·9	9	4·9	58	32·3
" "	12	25	13·8	5	2·7	56	31·2
" "	19	34	18·9	7	3·8	57	31·8
" "	26	28	15·5	4	2·2	56	31·2
" October	3	26	14·1	3	1·6	80	44·7
" "	10	20	11·0	3	1·6	65	36·3
" "	17	32	17·7	3	1·6	67	37·4
" "	24	22	12·1	2	1·1	56	31·2
" "	31	29	16·0	2	1·1	65	36·3
" November	7	10	22·2	3	1·6	67	37·4
" "	14	35	19·4	3	1·6	56	31·2
" "	21	33	18·3	7	3·8	45	25·0
" "	28	25	13·8	1	·5	45	25·0
" December	5	38	11·1	3	1·6	48	26·7
" "	12	29	16·0	0	·0	53	29·5
" "	19	19	10·4	1	·5	62	34·6
" "	26	22	12·1	3	1·6	41	22·8
" January	2	24	13·2	1	·5	63	35·2



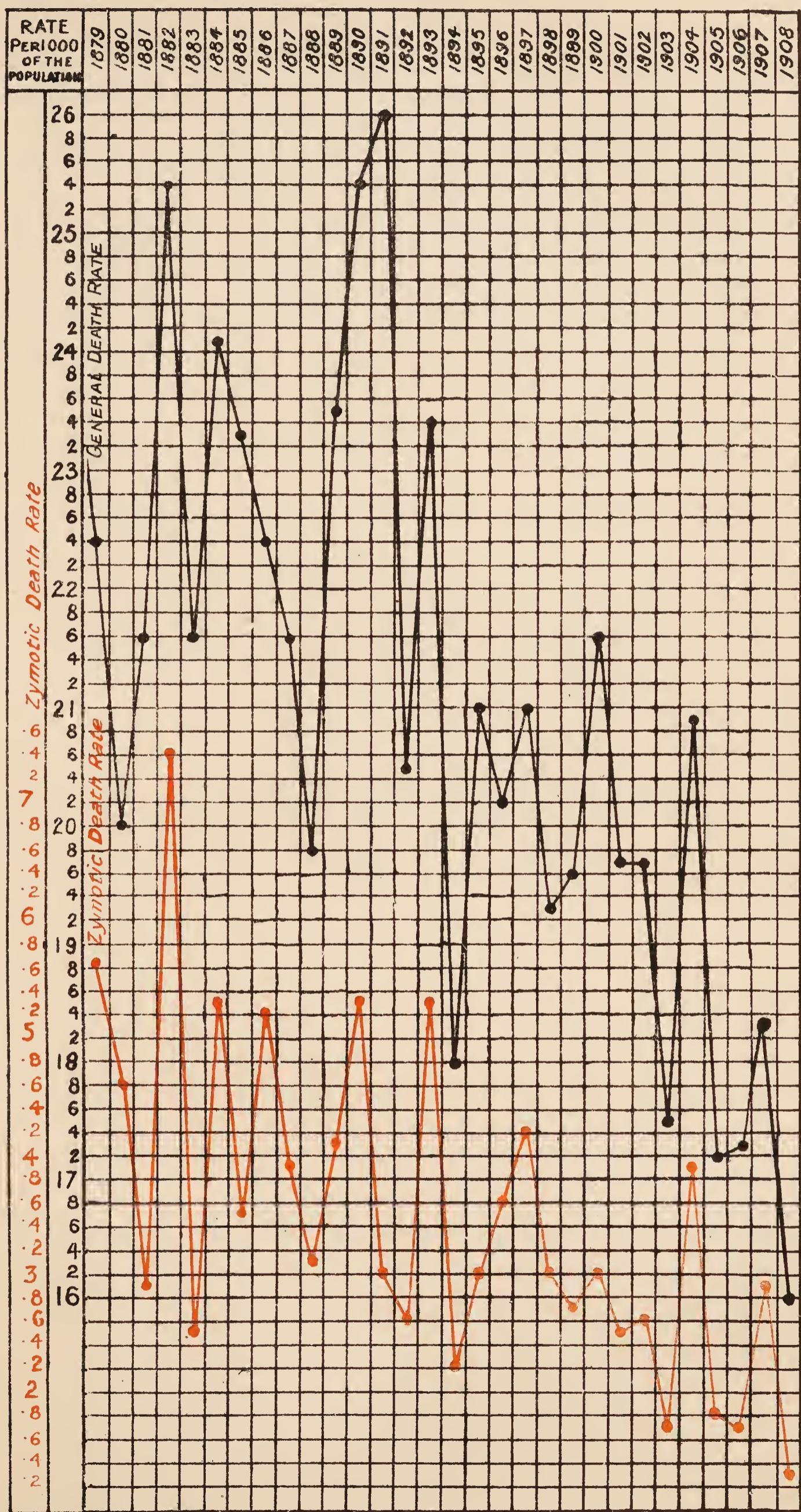
# CHART NO. I.

Birth Rate - S<sup>T</sup> HELENS, - 1879 - 1908.



# CHART No. 2.

*Death Rate & Zymotic Death Rate - ST HELENS, 1879-1908.*





II.

*Records of Disease.*

## **RECORDS OF DISEASE.**

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### **THE ZYMOTIC DISEASES.**

The principal Zymotic Diseases recognised in this country are:— Smallpox, Measles, Scarlet Fever, Diphtheria, Whooping Cough, Typhus Fever, Typhoid Fever, and Epidemic Diarrhoea.

The total deaths from these diseases in St. Helens in 1908 was 124, giving a mortality rate for this group of 1·32 per 1,000. In England and Wales the rate was 1·29 per 1,000, and in the Great Towns 1·59.

The zymotic death rate for 1908 is the lowest on record.

The Zymotic death rates during the past six years are seen in the following table.

MORTALITY RATES PER 1,000 SINCE 1903.

	1903	1904	1905	1906	1907	1908
Small Pox	..	0·00	..	0·00	..	0·00
Measles	..	0·01	..	0·47	..	0·00
Scarlet Fever	..	0·29	..	0·17	..	0·30
Diphtheria	..	0·26	..	0·24	..	0·18
Whooping Cough	..	0·34	..	0·55	..	0·07
“Fever”	..	0·20	..	0·12	..	0·12
Diarrhoea	..	0·60	..	1·35	..	0·62
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	1·72	3·96	1·88	1·79	2·78	1·32

The mean death rate from Zymotic Diseases for periods of five years is seen in the following table, which shows that though temporary fluctuations have occurred, this death rate has been continuously falling.

ZYMOTIC DEATH RATE SINCE 1878.

Year.	Rate.										
1878	4.2	1883	2.5	1888	3.1	1893	5.3	1898	3.0	1903	1.7
1879	5.7	1884	5.3	1889	4.1	1894	2.2	1899	2.7	1904	3.9
1880	4.6	1885	3.5	1890	5.3	1895	3.0	1900	3.0	1905	1.8
1881	2.9	1886	5.2	1891	3.0	1896	3.6	1901	2.5	1906	1.7
1882	7.4	1887	3.9	1892	2.6	1897	4.2	1902	2.6	1907	2.3
Mean	4.9		4.0		3.6		3.6		2.7		2.3

1908      ...      ...      ...      1.32

The Zymotic death rate in the first quarter of the year was 0.42 ; in the second 0.57 ; in the third 2.85 ; and in the last quarter 1.49 per 1,000 of the population. It was therefore greatest in the third quarter.

In Table VII., page 95, will be found certain details regarding the deaths from Zymotic diseases with reference to age and locality.

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The diseases to be notified under the Infectious Disease (Notification) Act, 1889, are small-pox, cholera, diphtheria, membranous croup, erysipelas, scarlet fever, and the fevers known by any of the following names :—typhus, typhoid, enteric, relapsing, continued, or puerperal.

The number of notifications received from Medical Practitioners during the year was 1201. This was 640 more than the number for the previous year.

NOTIFICATIONS IN PAST 10 YEARS.

1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
752	934	1090	1525	1024	755	609	631	561	1201

These numbers do not include the notifications of chicken-pox required from time to time, nor the voluntary notifications of phthisis pulmonalis.

**Small-Pox.**—Cases notified, 0 ; deaths, 0.

RECORD OF PREVIOUS YEARS.

		1899	1900	1901	1902	1903	1904	1905	1906	1907	1898
Cases	..	..	0	0	0	4	27	34	1	0	0
Deaths	..	..	0	0	0	0	0	3	0	0	0
Fatality per cent		—	—	—	—	0	0	8·8	0	—	—

The Borough has been free from Small-pox since April, 1905.

The following table gives the vaccination returns for St. Helens since 1894. The figures have been supplied by Mr. Griffin, Vaccination Officer for St. Helens.

VACCINATION RETURNS SINCE 1894.

YEAR	1 Births.	2 Vaccin- ated.	3 Insus- ceptible	4 Read.	5 Con. Obje't'r	6 Post- poned.	7 Removed	8 Un- accounted	Percentage not Vaccinated including Columns 5, 6, 7, 8
1894	*2711	2284	10	312	1	—	99	5	4·3
1895	*2943	2443	17	378	3	1	99	2	4·1
1896	*3006	2538	14	356	—	4	92	2	3·7
1897	*3209	2680	11	390	4	7	110	7	4·9
1898	*3238	2696	15	383	14	1	103	15	4·6
1899	*3126	2625	32	346	10	3	94	16	4·8
1900	*3148	2654	10	367	5	12	82	18	4·2
1901	3157	2639	4	391	11	29	59	24	4·4
1902	3245	2788	4	342	7	12	58	34	3·8
1903	3391	2977	8	325	2	6	62	11	2·6
1904	3375	2940	7	341	10	10	42	25	2·8
1905	3259	2923	3	270	6	10	29	18	2·1
1906	3137	2733	5	318	8	12	39	22	2·8
1907	3185	2810	9	257	24	19	49	17	3·7

\*The above Returns are for St. Helens Sub-District of the Prescot Union, which does not include quite the whole of the Borough.

The Borough compares very favourably in respect to vaccination with other towns.

**Measles.**—Cases, 39; Deaths, 0; Fatality per cent, 0·0.

## RECORD OF PREVIOUS YEARS.

		1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Cases	..	470	828	355	1245	30	2194	807	160	2123	39
Deaths	..	21	59	7	59	1	131	41	10	141	0
Fatality per cent		4·4	7·1	1·9	4·7	3·3	5·9	5·0	6·2	6·6	0 0

### MORTALITY RATE PER 1000 IN PREVIOUS YEARS.

	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	
St. Helens	..	.24	.66	.07	.68	.01	1.47	.45	.10	1.56	0.0
England and Wales	.30	.39	.40	.38	.27	.35	.32	.27	0.36	0.22	

The Borough was almost free from Measles in 1908.

DEATHS OCCURRING IN EACH MONTH 1899 TO 1908.

Year.	Jan.	Feb.	Mar.	April.	May	June	July	Aug	Sept.	Oct.	Nov.	Dec.	Total.
1899...	0	0	0	0	0	2	0	0	1	5	4	9	21
1900...	19	9	6	9	5	2	3	5	1	0	0	0	59
1901...	0	0	1	0	1	1	0	0	0	1	0	3	7
1902...	7	7	8	8	9	9	1	2	2	5	1	0	59
1903...	0	0	1	0	0	0	0	0	0	0	0	0	1
1904...	0	2	21	31	9	16	19	4	0	3	11	15	131
1905...	6	1	12	13	4	3	1	0	0	0	1	0	41
1906...	0	0	0	1	1	0	0	0	0	0	3	5	10
1907...	11	39	51	20	12	4	4	0	0	0	0	0	141
1908...	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	43	58	100	82	41	37	28	11	4	14	20	32	470

### AGES AT DEATH FROM MEASLES—1899 TO 1908.

**Scarlet Fever.** Cases, 802; deaths, 29; fatality per cent., 3·61.

RECORD OF PREVIOUS YEARS.

	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Cases .. ..	335	580	719	1224	728	416	270	237	207	802
Deaths .. ..	8	25	29	52	26	17	16	4	10	29
Fatality per cent ..	2·38	4·3	4·03	4·2	3·57	4·08	5·92	1·68	4·83	3·61

MORTALITY RATE PER 1000 IN PREVIOUS YEARS.

	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
St. Helens .. ..	·09	·28	·34	·60	·29	·17	·17	·04	·10	·30
England and Wales ..	·12	·12	·13	·15	·12	·11	·11	·10	·09	·08

The number of cases of Scarlet Fever notified in 1908 is the largest notified in any one year since 1902; the fatality rate was less than in 1907.

The disease was most prevalent in North Ecclestone, South Ecclestone, and North Windle Wards. The number of cases notified was largest in the months of October and December. The following table giving the monthly and ward distribution of the cases, shows that the increased prevalence of the disease occurred in the last four months of the year, and was most marked in North Ecclestone.

CASES OCCURRING IN EACH WARD MONTH BY MONTH.

WARDS.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total
North Ecclestone	1	4	5	5	7	5	6	5	33	32	21	27	151
South Ecclestone	—	4	11	11	5	7	6	3	14	21	26	18	126
Central .....	—	1	2	—	—	1	1	—	12	16	9	6	48
North Windle ..	2	1	4	7	12	11	9	4	5	13	21	23	112
South Windle ..	7	1	3	2	2	2	4	3	11	13	12	19	79
Hardshaw ....	5	5	4	2	9	8	5	4	8	20	9	9	88
Sutton East....	6	3	3	5	5	8	4	7	6	6	7	6	66
Sutton West ..	—	—	10	4	8	2	4	7	1	8	6	11	61
Parr .....	—	1	—	5	3	2	2	6	5	11	14	22	71
Total ..	21	20	42	41	51	46	41	39	95	140	125	141	802

The greatest incidence of the disease fell on the early years of life, 74·5% of the cases being under 10 years of age. All the deaths were in children under 9 years of age; the fatality rate was greatest between one and two years of age.

## CASES AND DEATHS AT VARIOUS AGES.

Ages ..	Months.				Years.												Total
	0-3	3-6	6-9	9-12	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10 to 15	15 to 20	20 & over	
Cases ..	—	3	2	6	29	50	88	87	77	90	60	58	48	130	38	36	802
Deaths	—	—	--	1	5	6	9	4	1	1	1	1	—	—	—	—	29

The 802 cases occurred in 670 houses as follows :—In 574 houses (71·5% of the cases) only one case occurred ; in 68 houses two cases occurred ; in 21 houses three cases occurred, in 6 houses four cases occurred, and in one house five cases occurred. In the 670 houses in which cases of scarlet fever occurred there were 1309 other children who were said not to have had scarlet fever previously and who did not contract it during the year.

The number of cases removed to hospital was 622, or 77·5 per cent of the cases. The 622 children were removed from 532 houses in which the number of remaining susceptible children who did not contract the disease during the year was 701. In 138 other houses all of which were large and commodious, 180 cases were isolated at home, and in these, the number of remaining susceptible children who did not contract the disease was 221. In addition to isolation the other precautions adopted were, visits of enquiry by the Sanitary Inspectors and in some cases by the Medical Officer, disinfection and the supply of disinfectants, and exclusion of the children of an infected household from school.

**Diphtheria.** Cases, 211 ; deaths, 17 ; fatality per cent, 8·05.

## RECORD OF PREVIOUS YEARS.

	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	
Cases ..	..	64	77	85	93	126	169	181	190	199	211
Deaths ..	..	15	19	33	20	23	22	18	22	11	17
Fatality per cent ..	23·4	24·6	38·8	21·50	18·25	13·01	9·94	11·57	5·52	8·05	

## MORTALITY RATE PER 1000 IN PREVIOUS YEARS.

	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	
St. Helens ..	..	·17	·21	·38	·23	·26	·24	·20	·24	·12	·18
England and Wales	·29	·29	·27	·23	·18	·17	·16	·17	·16	·15	

There is again a slight increase in the number of cases of Diphtheria during 1908, but the fatality rate in this disease as well as the mortality rate per 1,000 is very low. This indicates that a proportion of the increase in the notifications is due to the better recognition of the milder cases. It is also probably accounted for by the more effective medical

treatment of the disease, which has been made possible in all cases by the free distribution of diphtheria antitoxin by the local authority. The following table gives the monthly and ward distribution of the cases. It will be seen that the wards which suffered most severely were East Sutton, South Ecclestone, Hardshaw and Parr, while the greatest number of cases occurred in June.

CASES OCCURRING IN EACH WARD MONTH BY MONTH.

WARDS.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total
North Ecclestone	2	1	3	2	2	1	—	1	3	5	1	1	22
South Ecclestone	1	2	8	3	2	3	3	2	4	2	1	3	34
Central .....	—	—	—	1	2	—	1	—	2	2	2	—	10
North Windle..	3	—	1	3	—	4	2	—	2	5	1	—	21
South Windle..	—	—	—	—	—	—	—	—	1	2	2	—	5
Hardshaw ....	2	1	2	1	6	9	5	—	3	1	3	1	34
East Sutton....	2	3	4	3	4	5	—	5	5	4	3	4	42
West Sutton ..	3	3	1	—	—	1	—	1	—	1	—	1	11
Parr .....	2	2	4	3	6	2	1	1	2	1	2	6	32
Totals ..	15	12	23	16	22	25	12	10	22	23	15	16	211

The greatest incidence of the disease fell on children under ten years of age, and the disease was most fatal at the ages from 1 to 5 years.

CASES AND DEATHS ACCORDING TO AGE.

	Under 1 year	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-15	15-20	Over 20	Total
Cases ..	2	5	16	22	16	21	11	12	13	7	37	12	37	211
Deaths ..	2	2	4	4	2	—	1	1	—	—	—	—	1	17
Fatality per cent	100·0	40·0	25·0	18·1	12·5	0·0	9·0	8·3	0·0	0·0	0·0	0·0	2·7	8·05

There was no epidemic prevalence of the disease in 1908. The greatest number of notified cases in any one school in 1908 was 10 in Sutton National Schools, while 8 each occurred in Holy Cross and Parr Mount Schools.

The 211 cases notified occurred in 200 houses as follows :—In 190 houses (90·0% of the cases) only one case occurred ; in 9 houses two cases occurred, and in one houses three cases occurred. In the 200 houses, in which the cases of diphtheria occurred, there were 297 children under 10 years of age, who were said not to have had diphtheria within six months previously, and who did not contract it during the year.

The number of cases removed to hospital was 141, or 66·8 per cent of the cases. The 141 cases were removed from 134 houses, in which the number of remaining susceptible children who did not contract the disease during the year was 238. In 66 houses, which were almost all large and commodious, 70 cases were isolated at home, and in these the number of remaining susceptible children who did not contract the disease was 79.

In 20 or 9·4 per cent. of the houses in which diphtheria occurred drainage defects were found.

The methods adopted in the control of diphtheria, in addition to the usual means of hospital isolation, etc., were the free supply by the local authority to the medical practitioners of antitoxin for prophylactic and curative purposes, and the bacteriological examination of the throat in all suspected cases. These were extensively used and proved of great service both to the public and to the medical attendant.

### **Whooping Cough.** Deaths 7.

#### RECORD OF PREVIOUS YEARS.

	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908		
DEATHS	..	..	41	56	17	18	30	49	26	5	52	7

#### MORTALITY RATE PER 1000 IN PREVIOUS YEARS.

	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	
St. Helens ..	..	.47	.63	.20	.20	.34	.55	.28	.05	.56	.07
England and Wales	.30	.34	.30	.29	.27	.34	.25	.23	.29	.27	.

There was a decrease in the number of deaths from Whooping Cough during 1908, fewer deaths being recorded from this cause than in any year with the exception of 1906, when only 5 deaths occurred.

## DEATHS OCCURRING IN EACH WARD MONTH BY MONTH.

WARDS.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
North Eccleston	—	—	—	—	—	—	—	—	—	—	—	—	—
South Eccleston	—	—	—	—	—	—	—	—	—	—	—	—	—
Central .....	—	—	—	—	—	—	—	—	—	—	—	—	—
North Windle..	1	—	—	—	—	—	—	—	—	—	—	—	1
South Windle..	—	—	—	—	—	—	—	—	—	—	—	—	—
Hardshaw .....	—	2	1	—	—	—	—	—	—	—	—	—	3
Sutton, East ..	1	—	—	—	—	—	—	—	—	—	1	—	2
Sutton, West ..	—	—	—	—	—	—	—	—	—	—	—	—	—
Parr .....	—	—	—	—	—	—	—	—	—	—	1	—	1
Totals ..	2	2	1	—	—	—	—	—	—	—	1	1	7

The fatal cases occurred mostly in children under three years of age five of the deaths occurred in the first quarter of the year.

## AGE AT DEATH OF CASES OF WHOOPING COUGH.

Ages.	Months.			Years.				Total.
	0-3	3-6	6-12	1-2	2-3	3-4	4-5	
Deaths ..	—	—	2	2	2	—	—	1 7

**Typhoid Fever.** Cases, 90 ; Deaths, 12 ; Fatality per cent. 13·3.

## RECORD OF PREVIOUS YEARS.

	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Cases .. .	221	123	164	81	76	61	37	99	61	90
Deaths .. .	43	19	34	25	18	13	2	18	12	12
Fatality per cent.	19·4	15·4	20·7	30·8	23·7	21·3	5·4	18·1	19·6	13·3

## MORTALITY RATE PER 1000 IN PREVIOUS YEARS.

	1899	1900	1901	1902	1903	1904	1905	1906	1907	1898
St. Helens ..	.49	.21	.40	.29	.20	.14	.02	.19	.12	.12
England & Wales	.20	.17	.16	.13	.10	.09	.09	.09	.07	.07

There was an increase in the number of notifications over that of last year, but the number of cases notified is comparatively small and the fatality rate is low.

## CASES OCCURRING IN EACH WARD MONTH BY MONTH.

WARDS.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total.
North Eccleston	—	—	—	—	—	2	—	2	8	24	8	4	48
South Eccleston	1	—	—	—	—	—	—	1	4	1	1	—	8
Central ..	—	—	—	1	—	—	1	—	1	1	—	—	4
North Windle ..	—	—	—	—	—	1	—	—	—	1	—	—	2
South Windle ..	—	—	1	—	—	—	—	—	2	—	1	—	4
Hardshaw ..	—	—	—	—	—	—	—	3	—	—	2	1	6
East Sutton ..	1	—	—	—	—	—	1	—	—	2	2	3	9
West Sutton ..	—	1	2	—	—	—	1	—	—	—	1	2	7
Parr ..	—	—	—	—	—	—	—	—	1	—	—	—	2
Total ..	2	1	3	2	—	5	1	6	16	29	15	10	90

The following table shows the sickness rate per 1000 of the population in each ward since 1899.

## MORBIDITY RATE PER 1000 IN EACH WARD.

WARDS.	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Eccleston, North ..	3.22	1.34	1.49	0.46	1.81	.71	.70	1.74	.59	4.04
Eccleston, South ..	2.28	1.23	2.38	1.18	0.63	.20	.20	0.91	.70	.78
Central ..	1.68	0.55	1.66	0.42	0.13	1.36	.27	0.66	.52	.52
Windle, North ..	1.43	2.20	2.28	1.18	0.66	.73	.32	0.39	.15	.15
Windle, South ..	2.15	1.37	2.43	0.84	1.59	.11	.32	1.81	1.46	.44
Hardshaw ..	2.88	1.82	1.75	1.53	0.70	.99	.39	2.03	1.23	.56
Sutton, East ..	1.13	0.91	1.86	0.67	0.77	.65	.64	0.64	.84	.93
Sutton, West ..	1.70	0.73	1.84	0.61	1.00	.76	.54	0.76	.47	.65
Parr ..	6.06	2.17	1.80	1.36	1.14	.75	.25	0.82	.18	.17
Whole Borough ..	2.55	1.37	1.93	0.94	0.86	.68	.41	1.08	.65	.90

From the preceding tables it will be seen that the increased prevalence of the disease was due to an outbreak in North Eccleston Ward during the months of September, October, and November.

This outbreak occurred in the neighbourhood of Rodney Street, New-town, and was carefully investigated. It was believed to be due to the spread of the disease from an unrecognised case which had sickened about

the middle of August. About that time this patient was confined to the house for some weeks, remaining in bed only for a few days, suffering from what was called a "feverish cold" or Influenza. This illness was discovered in the beginning of October when the patient's blood was found to give a distinct positive result with Widal's reaction, and as there was no previous history of Enteric Fever, this helped to establish the nature of his recent illness. The urine was also examined at that time bacteriologically, but as the typhoid bacillus was not found in it he was believed to be free from infection. The subsequent cases in Rodney Street numbered 20, and they all occurred at such a time as suggested they were infected by this unrecognised case, the onset of their illness all dating from the 14th September to the 13th October. The original case returned to work towards the end of September and two men who were associated with him in his work sickened in the middle of October.

The exact means of spread from the initial case to the secondary cases remained obscure, but the tub and pail system of scavenging at these houses in Rodney Street would permit the retention of infected material in the neighbourhood of the houses, and give increased opportunities for secondary cases to arise. In this street-outbreak the tendency of the disease to remain on the side of the street where it began was noted, no cases having occurred on the other side. A similar immunity of one side of a street has been noted on previous occasions in St. Helens, although the present outbreak was peculiar in this, that this immunity extended to the houses in Virgil Street to which the back passage was common with the infected side of Rodney Street. The drainage arrangements of the houses in the street which would naturally seem to explain those peculiarities, were carefully enquired into, but no satisfactory scientific explanation was discovered.

Apart from this prevalence, the cases of Enteric Fever were mostly sporadic. The cases occurred in 69 houses as follows:—In 57 houses one case occurred, in 6 houses two cases occurred, in 5 houses three cases occurred, and in one house 6 cases occurred. There was no evidence of milk or water infection, and when secondary cases arose they were invariably associated with such defective means of scavenging and cleansing as occurs in houses with privy ash pits.

The Sanitary conveniences in 23 cases were privy middens, in 46 tub and pail, and in 21 water closets. The houses with water closets in which typhoid fever occurred were almost invariably those in the neighbourhood of privy midden houses, from which apparently the infection spread, but

even disregarding this the figures show a result much in favour of the water carriage system.

The cases were mostly children or young adults.

The age incidence of the notified and fatal cases is given in the following table :—

Ages.	YEARS.							Total
	Under 5 years.	5—10	10—15	15—20	20—25	25—30	Over 30	
Cases ..	8	18	14	10	15	7	18	90
Deaths ..	1	2	—	—	2	3	4	12

Of the cases notified 89, or 98·8 per cent. were removed to hospital.

The precautions adopted to prevent the spread of the disease were the same as in former years, namely, (1) enquiry as to the source of infection and the existence of insanitary conditions in the house ; (2) immediate removal of any insanitary conditions in the neighbourhood of the house ; (3) the removal, by means of special pails, of all infective and infected material, twice or thrice weekly when the patient remained at home ; (4) the supply of disinfectants twice a week, and the final disinfection of the premises ; and (5) the removal of the patient, when practicable, to hospital. In addition to these precautions, the Health Committee continued their good work in the conversion of privy middens and tub and pail closets to water closets, under Section 80 of the St. Helens Corporation Act, 1898.

During the year 143 examinations were made in the bacteriological laboratory of the blood of persons suspected to be suffering from Typhoid Fever ; 51 proved positive and 92 negative, (see page 51).

### Diarrhoea.—Deaths 59.

DEATHS ..	RECORD OF PREVIOUS YEARS.									
	1899 ..	1900 ..	1901 ..	1902 ..	1903 ..	1904 ..	1905 ..	1906 ..	1907 ..	1908 ..
	114	91	97	50	53	120	66	105	36	59

St. Helens ..	MORTALITY RATE PER 1,000 IN PREVIOUS YEARS.									
	1899 ..	1900 ..	1901 ..	1902 ..	1903 ..	1904 ..	1905 ..	1906 ..	1907 ..	1908 ..
England & Wales ..	·98	·69	·91	·38	·50	·86	·59	·87	·29	·50

The disease now to be considered is distinguished by special features of its own. No immediate cause can usually be discovered for the attack. Although not confined to any one season this disease is apt to occur in epidemics in the early autumn, particularly after a hot dry summer. Infants—especially those that are hand-fed—and young children are particularly liable to be attacked, and to both of these the disease is very fatal, but older children and adults are not wholly free from this illness, which is then usually less severe. Diarrhoea is in most cases a prominent symptom, but it varies in degree and is sometimes accompanied by an amount of depression out of all proportion to its severity. The illness, like other zymotics, tends to run a definite course. The disease is probably of microbic origin, but the actual organism has not been definitely recognised. It would seem certain, however, that infection is conveyed by food, and that improper feeding creates a strong pre-disposition to attack. The disease is known by a great variety of names, which increases the difficulty of the classification of the cases, and it would be of great advantage if some distinctive name were generally used. The Royal College of Physicians distinguish diarrhoea deaths due to food infection from those in which this relation has not been established, and the Registrar General asks medical practitioners to "state the fact on their certificate in all cases where either "food infection or improper food is believed to have caused the fatal result." The term to be preferred in certifying such a death and used by the Registrar General is "Infective Enteritis."

Fifty-nine deaths took place from this disease in 1908 giving a death-rate per 1,000 living, of 0·62; in 1907, 36 deaths took place, giving a death rate of 0·39. In England and Wales the death rate from Diarrhoea in 1908 was 0.50 per 1,000.

The deaths occurred in greatest number in Parr Ward. The largest number of deaths were recorded in the month of August.

DEATHS OCCURRING IN EACH WARD MONTH BY MONTH.

WARDS.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
North Eccleston	—	—	—	—	—	—	—	2	—	—	—	—	2
South Eccleston	—	—	—	—	—	—	—	—	1	—	—	—	1
Central .....	—	—	—	—	—	—	1	3	1	—	—	—	5
North Windle..	—	—	—	—	—	—	—	2	2	—	—	—	4
South Windle ..	—	—	—	—	—	—	5	2	4	—	—	—	11
Hardshaw .....	—	—	—	—	—	—	2	6	3	—	—	—	11
Sutton, East....	—	—	—	—	—	—	—	2	3	1	1	—	7
Sutton, West....	—	—	—	—	—	—	—	1	1	—	2	—	4
Parr .....	—	—	—	—	—	—	2	7	5	—	—	—	14
Total ..	—	—	—	—	—	—	10	25	20	1	3	—	59

The following table recording the deaths from 1898 shows that by far the larger number of deaths (over 93%) occur in the third Quarter.

DEATHS IN EACH MONTH SINCE 1898.

	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
January ...	0	1	1	1	0	3	1	0	0	2	0
February ...	0	2	0	0	0	0	1	1	1	0	0
March ...	1	0	2	0	1	0	0	2	0	0	0
1st Quarter ...	1	3	3	1	1	3	2	3	1	2	0
April ...	0	0	2	0	1	1	1	2	0	2	0
May ...	2	0	0	1	1	1	0	0	2	1	0
June ...	4	0	2	2	3	0	0	4	1	1	0
2nd Quarter ...	6	0	4	3	5	2	1	6	3	4	0
July ...	16	28	13	33	0	3	14	11	8	1	10
August ...	54	47	42	50	5	19	61	35	29	9	25
September ...	51	29	23	7	26	16	30	10	52	11	20
3rd Quarter ...	121	104	78	90	31	38	105	56	89	21	55
October ...	9	5	4	1	8	7	9	1	9	8	1
November ...	3	1	1	1	3	3	3	0	1	1	3
December ...	0	1	1	1	2	0	0	0	2	0	0
4th Quarter ...	12	7	6	3	13	10	12	1	12	9	4
Total	140	114	91	97	50	53	120	66	105	36	59

The number of deaths from diarrhoea in each year bears distinct relationship to the meteorological conditions. In the appended chart No. 3 it will be seen that Diarrhoea became most prevalent in the second week of August, when the soil temperature reached 58°. The greatest number of deaths occurred in the second and fourth weeks in August and first week in September.

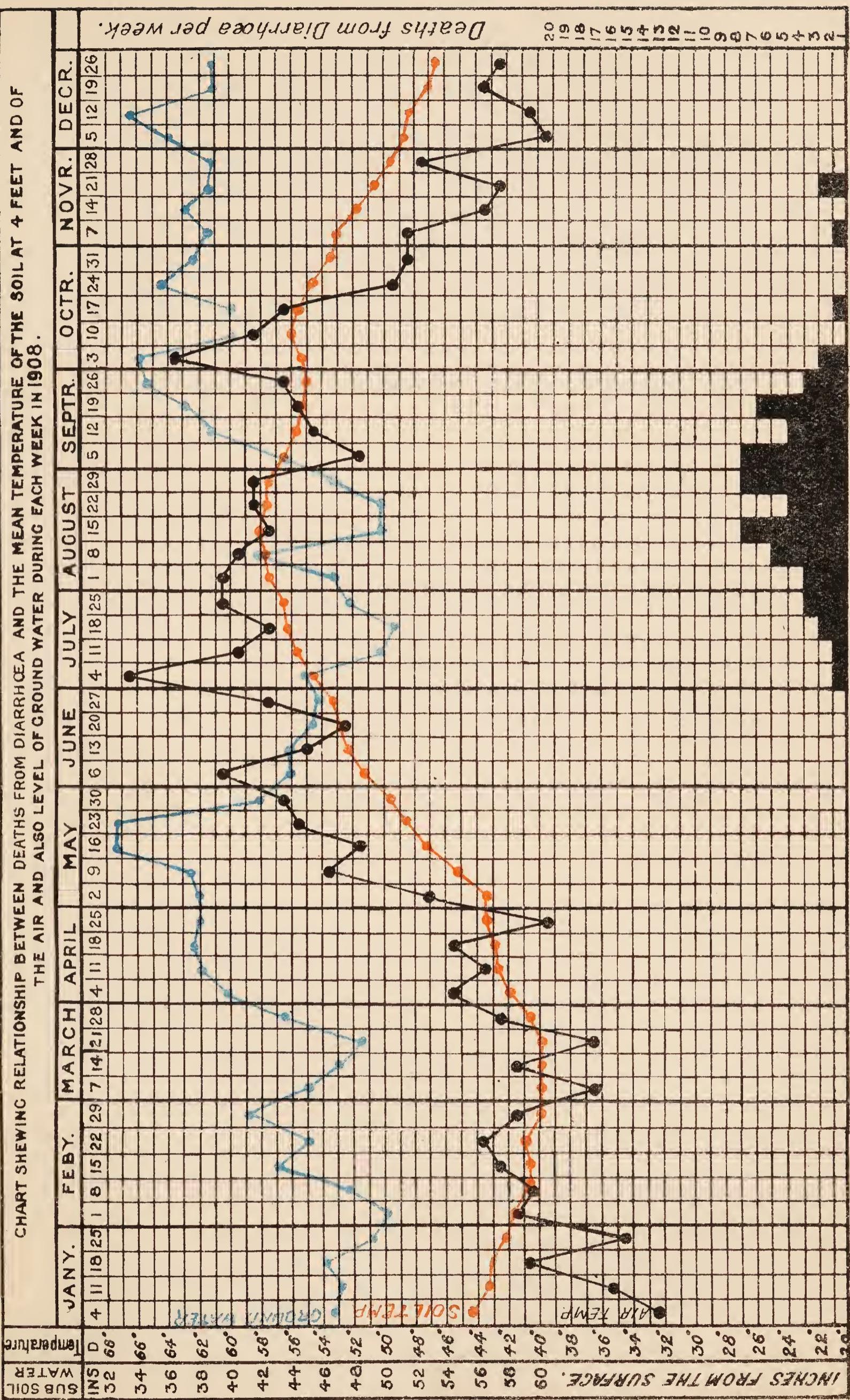
## AGES AT DEATH SINCE 1900.

AGE.	1900	1901	1902	1903	1904	1905	1906	1907	1908	Total
0 to 3 months	17	13	6	8	16	2	13	3	10	88
3 ,,, 6 ,,, ...	23	30	8	16	26	16	22	9	11	161
6 ,,, 12 ,,, ...	27	34	16	11	39	23	24	9	15	198
1 ,,, 2 years...	11	13	9	11	23	13	36	10	21	147
2 ,,, 3 ,,, ...	4	2	4	—	8	2	2	1	2	25
3 ,,, 4 ,,, ...	—	1	2	—	2	1	2	—	—	8
4 ,,, 5 ,,, ...	1	3	—	1	1	—	—	—	—	6
Over 5 ,,, ...	8	1	5	6	5	9	6	4	—	44
Totals ...	91	97	50	53	120	66	105	36	59	677

The table shows that during 1908, 61 per cent of the persons dying from this disease were under one year of age, while 35 per cent were over one and under two years.

### CHART No. 3.

CHART SHewing RELATIONSHIP BETWEEN DEATHS FROM DIARRHEA AND THE MEAN TEMPERATURE OF THE SOIL AT 4 FEET AND OF THE AIR AND ALSO LEVEL OF GROUND WATER DURING EACH WEEK IN 1908.





**Influenza.** Deaths, 22.

## RECORD OF PREVIOUS YEARS.

	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908		
DEATHS	..	..	19	33	16	6	10	15	17	12	22	22

Most of the deaths occurred in North Windle and Parr Wards. Only three of the deaths occurred in persons under 25 years of age.

**Puerperal Fever.** Cases, 12; deaths, 1. Fatality per cent, 8·33

## RECORD OF PREVIOUS YEARS.

	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908		
Cases	..	..	9	15	16	14	6	3	12	5	10	12
Deaths	..	..	8	9	7	4	0	1	5	3	2	1
Fatality per cent		88·8	60·0	43·7	28·5	0·0	33·3	41·6	60·0	20·0	8·33	
No. of live births to each death..		389	416	446	805	—	3321	647	1030	1577	3311	

The term Puerperal Fever has been removed from the nomenclature of the Royal College of Physicians. Pyaemia, Septicaemia or Septic Intoxication occurring in puerperal women should be described as Puerperal Pyaemia, Puerperal Septicaemia, or Puerperal Septic Intoxication. From the manner of certification of certain deaths in 1908 it would seem clear that one is below the actual number of deaths arising from this cause.

**Erysipelas.** Cases, 86; deaths, 3; Fatality per cent., 3·48.

## RECORD OF PREVIOUS YEARS.

	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908		
Cases	..	..	121	138	106	109	61	73	108	100	84	86
Deaths	..	..	3	2	2	3	0	1	6	3	7	3
Fatality per cent.		2·47	1·44	1·88	2·75	·00	1·36	5·66	3·00	8·33	3·48	

There was a slight increase in the number of cases of erysipelas notified but a decrease in the number of deaths. This disease, although a notifiable one, is not one of great importance from a public health point of view, as it largely depends on causes beyond the control of the local authority. The number of cases of wound erysipelas in 1908 was 18.

The cases occurring in each ward were as follows:—North Eccleston, 14; South Eccleston, 12; Central, 3; North Windle, 12; South Windle, 5 Hardshaw, 14; Sutton East, 6; Sutton West, 8; Parr, 12.

Of the cases notified, 4, or 4·6 per cent. were removed to hospital.

**Cerebro-Spinal Fever.** No cases of this disease came under the notice of the Medical Officer of Health, and no deaths are recorded from this cause.

## **GENERAL AND LOCAL DISEASES.**

The deaths occurring in the Borough during 1908 are set out on table VII, page 97, which shows the age periods and ward distribution of each disease. This section deals only with those diseases which call for special notice.

**Tuberculous Phthisis.** The total number of deaths arising from this disease last year was 113, an increase of 12 over that of the preceding year.

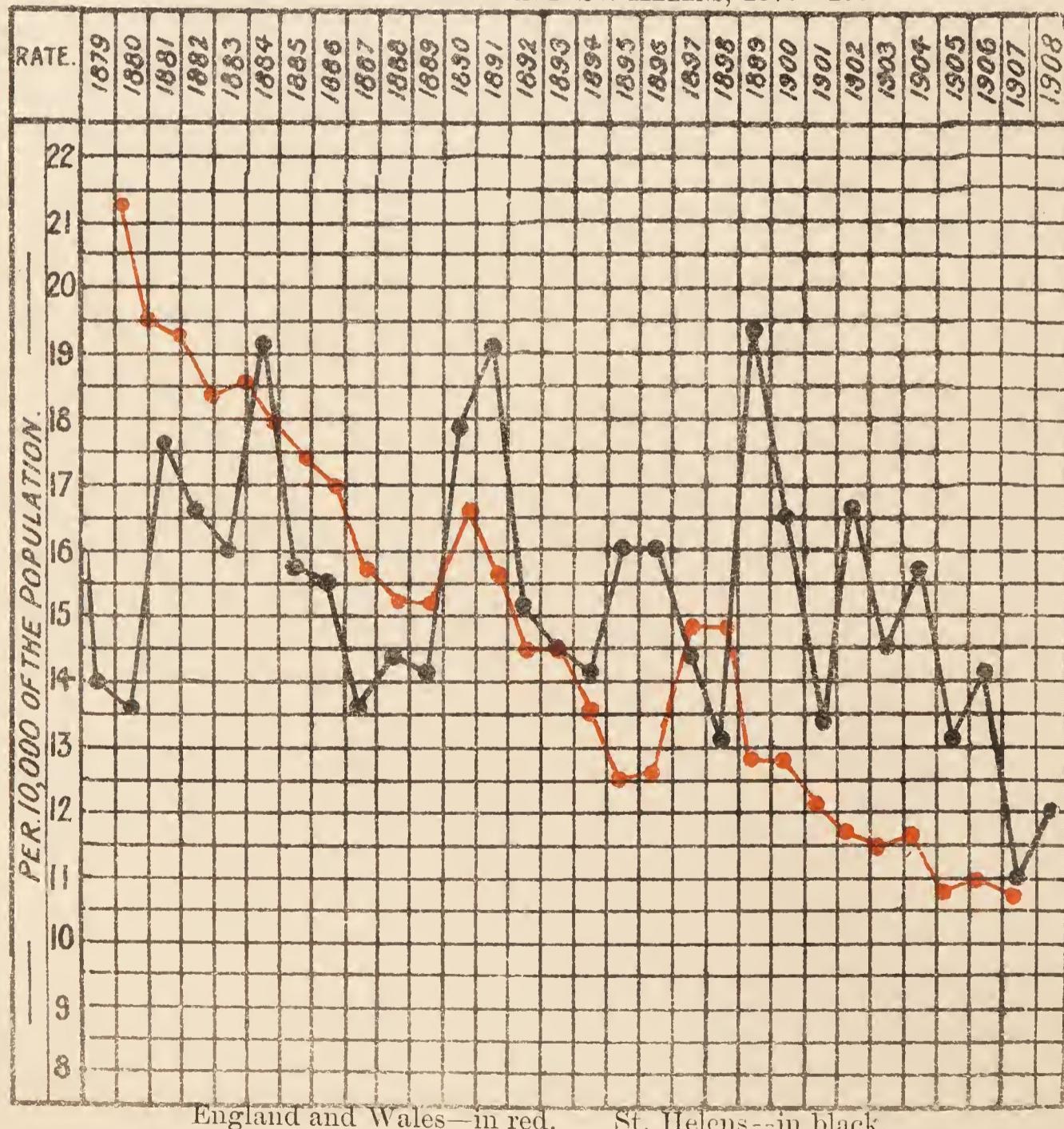
	RECORD OF PREVIOUS YEARS.									
	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
DEATHS ..	120	146	114	143	127	140	118	131	101	113

	MORTALITY RATE PER 1000 IN PREVIOUS YEARS.									
	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
St. Helens	1.94	1.65	1.34	1.66	1.45	1.58	1.31	1.43	1.10	1.20
England & Wales	1.34	1.33	1.26	1.23	1.20	1.23	1.14	1.15	1.14	—

The figures for the past year with respect to pulmonary tuberculosis, though not so good as those of last year, are, with that exception, the best recorded in St. Helens. The following chart shows the death rate per 10,000 in St. Helens and England and Wales since 1879.

DEATH RATES FROM TUBERCULOUS PHTHISIS PER 10000 OF THE POPULATION  
IN ENGLAND AND WALES AND ST. HELENS, 1879—1908.



A system of voluntary notification of Phthisis has been in operation in St. Helens since the end of 1899. The cases are reported to the Medical Officer of Health by the medical attendant, who is paid the ordinary notification fee for each case.

NOTIFICATIONS IN EACH YEAR.									
1900	1901	1902	1903	1904	1905	1906	1907	1908	
66	54	80	66	85	71	126	106	92	

Certain cases have been notified on two or more occasions, but the numbers given refer to the notifications of new cases in each year. The following re-notifications have been received :—In 1901, 2 ; in 1902, 2 ; in 1903, 1 ; in 1904, 4 ; in 1905, 1 ; in 1906, 7 ; in 1907, 12 ; and in 1908, 7.

Of the 113 deaths occurring last year 16 had been notified in previous years, 39 were notified in 1908, while 58 had not been notified at all. The total number of cases notified since notification began has been 746, and the number of deaths among these cases 358. The number of deaths since 1899 certified from this cause known to have occurred in the Borough has been 1,133. Voluntary notification therefore has not given anything like full information as to the existence of the cases during the time it has been in operation. It might, however, be considered a satisfactory measure, if those cases where precautions cannot be or are not taken to prevent the spread, were notified, but this is by no means always the case, as at least 33 of the fatal cases last year were not notified, although they were living under conditions when no precautions were taken. Again, among the notified cases it is too frequently found that notification is delayed until death is imminent, or indeed until death has taken place. The interval which elapsed between the receipt of the notification and the deaths of cases is seen in the following statement, which shows that over 48 per cent. of the cases were notified within four weeks of death.

Notified on or after day of death ..	..	3
„ within one week of death ..	..	4
„ 1 to 2 weeks before death ..	..	3
„ 2 to 4 weeks before death ..	..	9
„ 1 to 2 months before „ ..	..	8
„ 2 to 3 „ „ ..	..	4
„ 3 to 4 „ „ ..	..	5
„ 4 to 5 „ „ ..	..	1
„ 5 to 6 „ „ ..	..	1
„ 6 to 9 „ „ ..	..	3
„ 9 to 12 „ „ ..	..	4

It will be noticed that during the past three years a larger proportion of cases of phthisis have been notified. This increase is satisfactory and related probably to the measures which the Local Authority have taken during that time in offering isolation to the sufferers. The fall in the number of notifications since 1906 makes it clear, however, that in this

town, the time has come for consumption to be made a disease compulsorily notifiable; a welcome step in this direction has been taken by the Local Government Board in the Tuberculosis Regulations, 1908.

On the receipt of the notification, the patient is visited and information with respect to the infectious nature of his illness is left with him. If the sufferer be not in a position to take precautions to prevent the spread of the disease, or be not doing so, an offer is made to isolate him in the Borough Sanatorium, if accommodation be available at the time, where he is taught the general hygiene of his disease, and the measures to be taken to prevent its spread. During the past year 39 such cases were treated in the Borough Sanatorium, of which 36 were discharged much improved and three died. All the cases are kept under observation until death, or removal from the district of the Local Authority, occurs. Disinfection of the house is done from time to time during the progress of the case and after death, and so that this may be carried out in all cases whether notified or not, information of all deaths from phthisis is received from the Registrar, on their being registered. During the year the free bacteriological examination of the sputum in suspected cases of phthisis was continued. 100 specimens were submitted for examination, of which 30 were positive and 70 were negative.

The wards most affected in 1908 were North Eccleston, Central, and Parr. The great majority of the deaths occurred between 15 and 55 years of age, the largest number being recorded from 35 to 45 years.

YEARS	DEATHS AT VARIOUS AGES.									
	-1	-5	-10	-15	-25	-35	-45	-55	55-	
DEATHS	..	0	2	4	10	23	20	28	17	9

The following is a list of the occupations of the occupied males certified as dying from tuberculous phthisis during the past year :—

Coal miners	...	...	...	6	Labourer at pill factory	...	1
General labourers	...	...	3		Glass works' labourer	...	1
Chemical labourers	...	...	3		Grocer's manager	...	1
Colliery labourers	...	...	3		Clerk at chemical works	...	1
Glass blowers	...	...	2		Clerk in office	...	1
Glass flatteners	...	...	2		Clogger	...	1
Blacksmiths	...	...	2		Railway shunter	...	1
Glass Cutters	...	...	2		Insurance agent	...	1
Bottle finisher	...	...	1		Glass polisher	...	1
Bottle blower	...	...	1		Draper	...	1
Butcher	...	...	1		Timber yard labourer	...	1
Railway engine driver	...	1			Plumber	...	1
Railway brakesman	...	1			Gas maker at bottle works	...	1
Labourer at Iron Foundry	...	1			Gas maker at glass works	...	1
Pottery labourer	...	1			Labourer at wire works	...	1
Labourer at rope works	...	1			Engine winder at Colliery	...	1

**Other Tuberculous Diseases** The total number of deaths arising from these diseases was 78 ; this is an increase of two over that of the preceding year. The mortality rate from this cause in 1908 was 0·83 per 1,000. The main diseases here included are Tuberculous Peritonitis, which gave rise to 45, and Tuberculous Meningitis which gave rise to 18 deaths.

RECORD OF PREVIOUS YEARS.

	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
DEATHS ..	48	50	44	55	44	51	54	77	76	78

The Wards most affected were North Eccleston and East Sutton. Thirty of the deaths were of persons over two years of age ; 24 being over five years.

AGE INCIDENCE AT DEATH.

YEARS ..	-1	-5	-10	-15	-25	-35	-45	-55	55—
DEATHS ..	26	28	10	5	6	1	2	—	—

A large proportion of these deaths were certified as due to one or other form of abdominal tuberculosis, and this was much more frequent when the patient was young. The term "Tabes Mesenterica," has been expunged from the revised list of diseases in the recently issued Nomenclature of the Royal College of Physicians, and its use in the certification of death should now be discontinued by medical practitioners.

**Cancer and Malignant Diseases.** From this cause death arose in 56 cases, a similar number being recorded in the previous year. The mortality rate for St. Helens in 1908 was ·59 per 1,000.

RECORD OF PREVIOUS YEARS.

	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
DEATHS..	35	46	31	35	37	42	38	38	56	56

The mortality rate from these diseases shows a considerable increase. Two of the deaths registered last year were from Sarcoma, and the remaining 54 were from Cancer. The ward most affected was East Sutton, where 11 deaths occurred.

DEATHS AT VARIOUS AGES.

Years	-35	-45	-55	-65	-75	75—
Deaths	3	8	12	18	10	5

In 52 of the deaths the internal organs were affected, in only 4 was the disease in the external tissues.

**Respiratory Diseases.**—The number of deaths from these diseases was 295, a decrease of 77 from the previous year. This gives a mortality rate of 3·14 per 1000.

DEATHS IN PREVIOUS YEARS.

Years..	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Bronchitis ..	213	219	163	214	189	184	158	147	235	152
Pneumonia ..	130	192	133	156	149	146	129	106	110	103
Others ..	36	28	30	32	26	40	39	31	27	40
Total .. ..	379	439	326	402	364	370	326	284	372	295

The wards most affected were North Eccleston, South Eccleston, Hardshaw and East Sutton.

DISTRIBUTION OF DEATHS FROM BRONCHITIS AND PNEUMONIA.

WARDS.	BRONCHITIS.							PNEUMONIA.						
	1902	1903	1904	1905	1906	1907	1908	1902	1903	1904	1905	1906	1907	1908
Eccleston, North..	28	23	20	16	12	31	16	16	14	14	20	12	7	12
Eccleston, South..	22	27	24	14	11	18	15	8	8	17	7	12	11	21
Central .. ..	28	27	15	10	15	18	11	18	6	3	12	7	10	3
Windle, North ..	18	18	10	10	3	12	11	12	14	19	6	8	9	7
Windle, South ..	14	9	11	13	16	20	10	6	13	17	13	10	10	8
Hardshaw ..	27	23	34	17	21	28	25	17	28	15	23	7	8	9
Sutton, East ..	25	25	20	25	16	26	22	32	28	23	21	19	22	17
Sutton, West ..	27	13	14	15	14	22	11	31	21	19	12	10	10	10
Parr .. ..	25	24	36	18	20	39	15	16	17	19	11	18	20	15

The Royal College of Physicians have now placed Pneumonia among the infectious diseases in the recently revised Nomenclature, no longer regarding this disease as a member of the respiratory group.

**Deaths from Violence.** The total number of deaths from this cause was 43, as against 57 in the preceding year. This gives a mortality rate for St. Helens of 0·45 per 1000 for 1908, compared with 0·57 for England and Wales generally. It is unusual to record in St. Helens a smaller rate from this cause than in England and Wales. The deaths were accounted for as follows:—Accident or negligence, 40; and Suicide, 3.

During 1908 the Coroner held 60 inquests on the bodies of persons belonging to St. Helens, and certified 57 deaths.

**Uncertified causes of death.** The deaths included in this class are those which are registered without being certified by either a medical practitioner or the Coroner. The number of uncertified deaths registered in St. Helens during the past year was 50, being 3·4 per cent of the total deaths registered ; last year the percentage was 3·5. In England and Wales during 1908 the percentage of uncertified deaths was 1·4. The proportion of uncertified deaths in St. Helens is, therefore, much greater than that in England and Wales, and only 5 of the 76 great towns shows a higher figure ; it is, however, satisfactory to be able to record a smaller proportion in 1908 than in the previous year.

The ages at death of these cases in the Borough in 1908, and the reputed causes of death, are shown in Table VIII at the end of the report. It will be seen that 23, or 46 per cent of the deaths were of children under one year of age, while 11 or 22 per cent were of persons over 60 years of age. The great causes alleged in these cases by the persons registering the death are convulsions, premature birth, congenital debility, and heart disease, and it is not difficult to understand how deaths from some of these causes are so sudden as to prevent a medical practitioner seeing the case alive; the large practice of midwifery by midwives therefore accounts to some extent for the highness of this rate.



III.

*General Sanitation.*

## **GENERAL SANITATION.**

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### **HOSPITALS.**

The Borough possesses 156 beds in its two hospitals for the isolation of persons suffering from infectious disease. The commoner infectious diseases are treated at the Borough Sanatorium at Peasley Cross, where there is accommodation for 120 patients, while small-pox is treated in the Small-pox Hospital at Old Wint, where 36 patients can be isolated. The total number of cases admitted was 925, of which 29 were admitted from the Urban District of Haydock. This is the largest number of cases admitted in any one year since the hospital was opened in 1881.

The number treated in hospital each year since 1899 is shewn in the following table.

Year.	Admitted.	Died.	Fatality Rate per Cent.	Total days spent in Hospital.	Average duration of residence.
1899	401	37	9·2	18049	45·0
1900	445	31	6·9	19203	43·1
1901	620	44	7·0	26255	42·3
1902	753	50	6·6	32879	43·6
1903	617	36	5·8	28067	45·5
1904	456	28	6·1	22353	49·0
1905	388	31	8·0	16528	42·6
1906	552	47	8·5	21106	38·2
1907	532	47	8·8	20901	39·3
1908	925	54	5·8	35355	38·2

At the beginning of 1908, 80 patients were in the hospital, and during the year 925 were admitted, making 1005 under treatment. Of these 811 were discharged recovered, and 54 died, leaving 140 in the hospital on December 31st.

ADMISSIONS, DISCHARGES AND DEATHS DURING 1908.

DISEASE.	Patients in Hospital on Jan. 1st.		Admitted.		Discharged recovered.		Died.		Remaining in Hospital on Dec. 31st.	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
Scarlet Fever ..	17	24	278	361	235	293	16	11	51	74
Diphtheria ..	8	4	70	71	74	68	4	6	—	1
Enteric Fever ..	6	1	58	43	46	39	6	3	12	2
Phthisis ..	12	5	15	7	21	15	3	—	—	—
Other Diseases..	1	—	6	2	5	1	3	—	—	—
Observation ..	—	—	3	1	2	2	—	—	—	—
Erysipelas ..	—	1	3	1	2	1	1	1	—	—
Puerperal Fever	—	1	—	6	—	7	—	—	—	—
Totals ..	44	36	433	492	385	426	33	21	63	77
	80		925		811		54		140	

The proportion of deaths among the patients discharged during the year was 6·24 per cent. compared with 9·14 in 1907. The general fatality rate depends largely on the proportion of cases treated, as certain diseases have a much lower rate than others. In Scarlet Fever, 4·8 of the cases treated died ; in Enteric Fever, 9·5 ; and in Diphtheria, 6·5 die l. These rates are less in Scarlet Fever and Enteric Fever, but greater in Diphtheria, than those recorded last year. They all compare favourably with those recorded among the home treated cases, especially when it is remembered that it is only the worse housed cases that are removed to hospital.

The total number of days spent in hospital by all the patients was 35355 ; this gives an average duration of residence of 38·2 days per patient. The figures for each disease are given in the following table :—

DISEASE.	Scarlet Fever.	Diphtheria	Enteric Fever.	Phthisis	Oth'r Diseases (including observation cases).
Total duration of days in Hospitals	26659	2868	4067	1479	282
Average duration in days per patient treated	41·7	20·3	40·2	49·3	12·8

The average daily number of patients in hospital during 1908 was 96·6, the greatest number being 167, and the smallest 57 ; 167 is therefore

the largest number of patients that have ever been isolated in hospital at any one time in St. Helens. During the last three months of the year, owing to the prevalence of Scarlet Fever, it was decided to utilize the Old Wint Hospital for convalescent cases, and 60 cases spent some part of the time there; this hospital was open for 71 days.

The proportion of cases treated in hospital last year was 77·2 per cent. of the cases notified, and the following statement shows the percentage of cases so treated during the last ten years.

PROPORTION OF CASES TREATED IN HOSPITAL.

Years .. .	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Percentage of Cases Notified..	50·5	47·5	56·9	49·3	55·6	56·3	61·4	66·8	78·9	77·2

Percentages in Scarlet Fever, 77·5; Diphtheria, 66·8; Enteric Fever, 98·8. It is satisfactory to be able to record that little or no difficulty is found in the removal of cases to hospital, and the high figures are to be set down to the increased appreciation of hospital treatment by the people of the town.

During the year 39 cases of Phthisis were treated in the Sanatorium. Of these 36 were discharged improved, and 3 died. The object of this procedure is firstly to teach the sufferers such simple hygienic measures as can be carried out in their own homes, and secondly to facilitate a partial recovery, if possible. It is mostly cases badly housed and not isolated from other members of the family that are admitted, but remarkable improvement is noted in many from the new hygienic conditions, the more severe constitutional symptoms becoming abated, the cough and spit becoming much diminished, and the physical signs improved, while many begin to gain in weight. The symptoms of improvement have a marked educative effect on the patients treated, and encourage them in the continuance of the regime. Although several have relapsed since their discharge from hospital into their old habits, a few have derived some permanent improvement. Owing, unfortunately to the accommodation at the hospital being required for the notifiable infectious diseases less isolation of phthisis has been able to be done than in the two previous years.

The staff on duty at the Sanatorium at the end of the year consisted of the matron, 2 charge nurses, 7 staff and 13 probationer nurses, 17 servants and 2 porters. This is an increase of three staff nurses and one probationer nurse over the number recorded in the report of last year. The increase is, of course, due to the larger number of patients under treatment, and is of a temporary character.

**Disinfection.** In connection with the prevention of Infectious Disease the Hospital disinfecting van made 540 journeys to 780 houses for the removal of clothing, bedding, etc., for disinfection. The following were the articles disinfected :—

Beds .. .. .. ..	848
Pillows and Cushions .. .. ..	2500
Blankets, Sheets and Rugs .. .. ..	3390
Articles of Clothing .. .. ..	5930
Hospital Clothing and Bedding .. .. ..	3800
Library Books .. .. ..	312
Other Articles .. .. ..	766
 Total Articles ..	 <u>17546</u>

The number of days on which the disinfecter was used was 250.

### **BACTERIOLOGICAL LABORATORY.**

During the past year the number of specimens received for examination was 955, of which 367 proved positive and 588 negative.

#### BACTERIOLOGICAL SPECIMENS—1908.

Specimens.	Number Received.	Results.	
		Positive.	Negative.
Diphtheria—swab ...	552	150	402
Typhoid Fever—blood	143	51	92
Tubercle :—sputum ...	100	30	70
Ringworm—hair ...	113	108	5
Other Specimens ...	47	28	19
 Total... ...	 955	 367	 588

It is gratifying to be able to record the large number of specimens which continue to be received. The number received in each year since 1904 is as follows :—

Year .....	1904	1905	1906	1907	1908
Specimens	74	316	541	967	955

The laboratory proves invaluable to medical practitioners in enabling them to arrive at an earlier diagnosis in cases of infectious disease, and in these circumstances both the patient and the public profit from the more effective treatment and preventive measures. It is necessary, however, to remember that bacteriological examinations must be looked upon as aids to rather than determining factors in diagnosis.

## **HOUSING.**

The number of houses in the County Borough of St. Helens at the end of 1908 was 18,748, of which 937 were empty. The number built during the year was 127.

Through their powers under Section 141 of the St. Helens Improvement Act, 1869, the Corporation have made byelaws with respect to the closing of buildings or parts of buildings unfit for human habitation, and to prohibiting the use thereof for human habitation. These byelaws apply to old as well as to new buildings, and by their operation a large amount of useful work has been done in securing material structural alteration in many houses. During 1908, six sets of houses were reported to the Committee under the byelaws as being unfit for human habitation, and during 1907, 12 sets were so reported. The number of houses affected was 39, against 71 in 1907, while the number of rooms in the 39 houses was as follows :—12 were houses of two apartments, 25 of three, and 2 of four apartments.

A short description of the complaint made to, and the action taken by, the Committee, follows.

### **PHYTHIAN STREET AND RAVENHEAD PASSAGE.**

Here 12 houses were affected, the accommodation being in 8 cases two rooms, and in four cases three rooms. In nine of the houses the rent was 3/- per week, in two houses 2/7 per week, and in one house 2/8 per week. The houses were very dilapidated; the complaints made referred particularly to defective roofs, floors, and walls, the want of proper ventilation and drainage and yard space, defective water supply, and insufficient closet accommodation. These houses belonged to two owners, who each carried out satisfactory repairs, and they were allowed to again become tenanted.

### **COLLEGE STREET.**

A back house in No. 5 Court, consisting of two rooms, one above the other, was ordered to be closed by the Local Authority. It was let at a rent of 2/6 per week. The house was partly built of brick and party of rubble stone, and was in a most dilapidated and insanitary state; there was no through ventilation, and the windows would not open. The plaster on walls was very defective and decayed. There was no paving in front of house and no water supply. The house was demolished.

### **ELLISON'S SQUARE, THATTO HEATH.**

Here 10 houses were dealt with, the accommodation being in each case of three rooms, the rent being 2/9 per week each. The objections taken to

the houses included defective floors and plaster, dampness of dwellings, insufficient ventilation and yard accommodation, defective drainage, and dilapidated closet and ashpit accommodation. The Health Committee made an inspection of this property, and decided to ask the owner to carry out certain repairs. This property is still under the observation of the department.

#### ECCLESTON STREET.

Nine houses were here affected, the accommodation being in two cases, 4 rooms; in five cases, 3 rooms; and in two cases, 2 rooms, the rents ranging from 3/- to 3/6 per week. The chief defects in this property were the insanitary and insufficient closet accommodation, insanitary yard and want of proper ventilation. There was also no proper water supply or drainage system, while the floors and plaster of the wall, was very defective. The Health Committee made an inspection of this property and the houses were ordered to be closed. Extensive repairs were carried out by the owner and the houses have now been allowed to be retenanted, and are in a very satisfactory state.

#### PARR MOSS.

Five houses were here dealt with, having accommodation in four cases of 3 rooms, and in one case of 2 rooms. Four of the house were let at 3/- per week, and one at a nominal rent of 2/6 per year. The objection taken generally to all these houses was the want of a proper water supply, the only supply available being from one shallow well of from four to five feet deep, which was insufficiently protected from contamination. In addition also there was a want of drainage of any description. After protracted negotiations the owners of these houses found they were unable to carry out the requirements of the Committee, and decided to close them.

#### WESTFIELD STREET.

Here two houses were dealt with, being back houses behind Nos. 154 and 156, Westfield Street. The main objection to these houses was their situation. They were three roomed houses, rented at 3/3 each, and were situated at the bottom of the yards of Nos. 154 and 156, and the whole arrangement interfered with the proper external ventilation. They were also in a bad state of repair, with insufficient closet accommodation, and after being closed they were demolished.

The houses in Brook Street, New Cross Street, and Milk Street, reported in 1907, were materially improved by the owners. One of the houses was

closed and the yard accommodation thereby improved, and with the consent of the Health Committee the remaining houses were allowed to be re-tenanted.

The number of notices served for house improvement during 1908 was 4,176, while the number served for overcrowding and cleansing was 254 ; in many other cases the Inspectors carried out a great deal by personal advice, without resorting to the service of a notice.

In St. Helens only 0·4% of the families live in one-roomed houses, whereas in Dublin 36%, in Glasgow 24%, and in London and Edinburgh 14% live in houses of this size.

**Lodging Houses.**—The number of common lodging houses in the Borough is 11. No house was added to the register, and none were taken from it. The present accommodation for lodgers in the common lodging houses in St. Helens provides 85 sleeping rooms for 348 adults. As reported on previous occasions, the structural condition of these lodging-houses is by no means perfect, although some improvement is being very slowly made. Great improvement is noted in the manner in which the houses are kept. On the 22nd July and 12th August reports were submitted to the Health Committee dealing with the structural and general conditions found in the common lodging-houses in the town. 203 day inspections and 24 night inspections of the Common Lodging-houses were made by the Inspectors during the year, and all the houses were limewashed in April and October.

**Houses Let-in-Lodgings.**—During the year two houses were registered under the Byelaws with respect to houses let-in-lodgings, and from time to time inspections were made of the various houses on the Register. They were fairly well kept and no overcrowding was detected on any occasion.

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## **FOOD SUPPLY.**

**Milk.**—The total number of cowsheds in use within the Borough during 1908 was 40, of which two were registered during the year. The

number of persons registered as purveyors of milk, exclusive of cowkeepers, was 81; 6 were added and 2 ceased to be used during the year. All the cowsheds were inspected in 1908 by the Medical Officer of Health and Chief Inspector of Nuisances, while the number of inspections of dairies and cowsheds made by the district inspectors during the year was 238. At these inspections the cowsheds were found generally in good order, but in 14 instances some degree of overcrowding was noticed. This was reported to the Committee, and as a result of the warning given the overcrowding was reduced. In three cases it was necessary to serve notices to remedy defects in the structure and condition of the premises. The Veterinary Inspector examined, on two occasions, all the milk cows in the Borough during the year, in order to detect tubercular disease of the udder. No cows were found clinically affected with tubercle. The number of milk cows in St. Helens is 150, but this is only a small proportion of those supplying milk in the town. It is to be hoped that in the proposed milk legislation, provision will be made for more efficient inspection of cows and cowsheds in rural districts, as at present the greater part of the supply of milk to towns is obtained from these sources.

**Meat.**—At the end of 1908 there were in addition to the Public Abattoir 7 licensed private slaughter-houses in the Borough—five for cattle and pigs and two for pigs only. One licence was given up during the year. The number of butchers slaughtering on licensed premises outside the public abattoir was 11. The private slaughter-houses were regularly visited by the district inspectors, 300 visits being paid to them, and advice was also frequently sought by the licensees from the officers of the Local Authority as to what should be done in certain cases. Shop inspection was carried out frequently, and on each Friday and Saturday night and at occasional other times the market was visited. It was necessary to seize food in one case and to have it condemned by a magistrate, but in most other instances the meat was voluntarily given up, there having been no attempt to expose it for sale. The work of meat inspection at the Public Slaughter House is carried out by the Abattoir Superintendent, who is a practical butcher holding the certificate in meat inspection of the Royal Sanitary Institute. In any case of doubt or difficulty he consults with the Medical Officer of Health and the Veterinary Inspector, and this arrangement has worked smoothly and satisfactorily.

The number of animals slaughtered in St. Helens during 1908 was 17,258; of these 12,184 were killed in the Public Abattoir and 5,074 in licensed private slaughter houses.

## ANIMALS SLAUGHTERED IN ST. HELENS SINCE 1900.

ANIMALS KILLED.	1900	1901	1902	1903	1904	1905	1906	1907	1908
No. of Beasts killed within the Borough in public and private slaughter houses for market purposes ..	3647	3318	4937	3229	3049	2632	3118	3468	3260
No. of Sheep .. .. ..	3537	3780	3957	3288	3747	4161	5282	5045	5053
No. of Calves .. .. ..	413	338	451	343	329	301	404	509	440
No. of Pigs .. .. ..	7748	6810	7899	8942	9729	8291	6872	8141	8505
Total .. .. ..	15345	14246	17244	15802	16854	15385	15676	17163	17258
Beasts killed in the Corporation slaughter house, which are included in the above number .. .. ..	9597	8957	11381	9867	11457	9060	9043	11530	12184

## CATTLE BEASTS SLAUGHTERED SINCE 1899.

		Public Abattoir.		Private Slaughter Houses.
1899	...	2682	...	734
1900	...	3131	...	516
1901	...	2690	...	628
1902	...	4140	...	797
1903	...	2710	...	519
1904	...	2533	...	516
1905	...	2197	...	435
1906	...	2791	...	327
1907	...	3031	...	437
1908	...	2944	...	316

**Unsound Food**, seized or given up during the year ending 31st December, 1908.

16 Bodies of Beef affected with Tuberculosis.

276 Sets of Lungs do.

63 Udders do.

120 Beasts Heads do.

129 Briskets do.

69 Middle Pieces do.

30 Forequarters do.

39 Beasts Livers do.

## 104 Sets of Viscera affected with Tuberculosis

19 Beasts Spleens	do.
34 Skirts	do.
103 Beasts Kidneys	do.
8 Hindquarters	do.
15 Sirloins	do.
20 Bellies	
14 Beasts Hearts	do.
10 Ribs	do.
2 Neck Ends	do.
4 Pigs Viscera	do.
7 Pigs Plucks	do.
3 Pigs and Viscera	do.
3 Pigs Livers	do.
4 Pigs Hearts	do.
10 Pigs Bellies	do.
17 Pigs Heads	do.
14 Flanks	do.
3 Shoulders	do.
10 Rumps and Sirloins	do.

## 25 Udders affected with Abscesses

16 Livers	do.	
11 Sets of Lungs	do.	
42 Livers	do.	Necrosis
46 Livers	do.	Cirrhosis
1 Pigs Viscera	do.	do.
8 Sets Viscera	do.	Peritonitis
2 Pigs and Viscera	do.	Skin Eruption
63 Livers	do.	Distoma
5 Sets Lungs	do.	Dropsy
2 Calfes and Viscera	do.	do.
8 Sets Pigs Viscera	do.	do.
1 Pig and Viscera	do.	do.
1 Pigs Heart	do.	do.
1 Pigs Kidney	do.	do.
1 Pigs Stomach	do.	do.
2 Bodies of Beef	do.	do.
2 Lengths of Pork	do.	do.
19 Udders	do.	Mammitis

## 9 Sets of Lungs affected with Cysts

4 Livers	do.	do.
5 Sets of Lungs	do.	Congestion
2 Livers	do.	do.
3 Pigs Plucks	do.	do.
33 Livers	do.	Spotted Capillary
2 Hearts	do.	Pericarditis
1 Heart	do.	Tubercular Pericarditis
1 Belly	do.	Traumatic Pericarditis
2 Hearts	do.	do.
1 Skirt	do.	do.
2 Briskets	do.	do.
1 Set of Lungs	do.	Traumatic Injury
1 Liver	do.	do.
1 Skirt	do.	do.
48 Livers	do.	Flukes
3 Sets Lungs	do.	Echinococcus Veterinoreum
3 Livers	do.	do.
10 Livers	do.	Degenerated Cysts
2 Livers	do.	Degenerated Tissue
2 Livers	do.	Fatty Degeneration
2 Bellies	do.	do.
1 Pig and Viscera	do.	Dropsy and Tuberculosis
2 Hindquarters	do.	Septic Inflammation
1 Set Viscera	do.	do.
3 Pigs and Viscera,	do.	Extreme Emaciation
4 Pigs and Viscera	do.	Erysipelas.
2 Kidneys	do.	Nephritis.
172lbs. Beef	do.	Bone taint.
1 Set Pigs Lungs	do.	Pleurisy
1 Pig and Viscera	do.	Abscesses and Dropsy.
2 Flanks	do.	Inflammation.
1 Liver	do.	do.
1 Pig	do.	Jaundice.
1 Pigs Pluck	do.	Strongylus Paradoxus.
1 Set of Lungs	do.	do.
1 Pig and Viscera	do.	Septicæmia.
2 Pigs and Viscera	do.	Swine Fever.
2 Pigs Livers	do.	Cirrhosis

2 Loins of Pork	Attenuated.
36 Boxes of Fish	Mouldy.
13 Boxes of Fish	Decomposed.
140 do.	Putrid
2 Boxes of Kidneys	do.
3 Boxes of Oxtails	do.
1 Bag Offal	Unsound.
1 Bag Mussels	do.
108lbs. Beef	do.
2 Sets of Tripe	do.
2 doz. Kidneys	do.
15 Boxes of Fish	do.
4 Chucks	do.
1 Forequarter	do.
1 Set Lungs	do.
3 Livers	Pipey.
5 Middle pieces	Unmarketable from commencing decomposition
2 Briskets	do. do. do.
5 Sirloins	do. do. do.
2 Ribs	do. do. do.

**Food and Drugs.**—The number of visits paid by the Inspectors to shops during the year in the administration of the Food and Drugs Acts was 203, and the number of samples purchased and submitted for analysis was 214. The tables on pages 60 and 61 show the nature of the samples taken and the number found to be adulterated.

Of the 214 samples taken 6 were certified by the Public Analyst as not genuine, which shows 2·80 per cent, of adulteration. Five samples certified not genuine were samples of milk. The amount of adulteration in four of the cases was small ; the fifth case was reported to the Committee, and after going into the evidence they decided not to institute legal proceedings.

Certain samples were taken as test samples, as recommended by the Board of Agriculture, the full formalities of the Food and Drugs Act not being then complied with. They were as follows :—6 milk, 2 butter, 1 chicory, 1 coffee, and 1 whiskey. Among these samples five were certified as not genuine, 4 being samples of milk, and 1, butter. The one sample of butter was taken by the police, who instituted criminal proceedings against the vendor, who was convicted of obtaining money under false pretences.

The samples of Milk showed on analysis the following results :—

NON-FATTY SOLIDS. Per Cent.	FAT.										Total.
	Under 2·7	2·8	2·9	3·0	3·1	3·2	3·3	3·4	3·5	Over 3·5	
Under 8·1		1		2					1		4
8·2								2		1	3
8·3							1	1			2
8·4									1	13	14
8·5						3				5	8
8·6					1		1	3	3	6	14
8·7			2	1			1	1	2	11	18
8·8					1	2		3	3	8	17
8·9						1	1			14	16
9·0				1	3	3				10	17
Over 9·0				2	2	3	1	2	6	20	36
Total...	—	1		7	8	12	5	12	16	88	149

The following Table shows the work done by the Public Analyst during the year 1908.

Name of Sample Analysed.	Number of Samples Analysed.	Number of such Samples which were found to be adulterated.	Number of such Samples which were found to be genuine.	No. of Cases in which a Summons was taken out.
New Milk.. .. ..	149	5	144	—
Butter .. .. ..	53	1	52	—
Margarine .. .. ..	3	—	3	—
Cheese .. .. ..	5	—	5	—
Skim Milk Cheese .. .. ..	1	—	1	—
Coffee .. .. ..	1	—	1	—
Pepper .. .. ..	1	—	1	—
Whiskey .. .. ..	1	—	1	—
Total.. .. ..	214	6	208	—

APPENDED IS A TABLE SHOWING THE NUMBER OF SAMPLES SUBMITTED FOR ANALYSIS SINCE 1899, THE NUMBER OF SUCH SAMPLES WHICH WERE ADULTERATED, AND THE PERCENTAGES OF ADULTERATED SAMPLES DURING THE YEAR.

**Water Supply.**—St. Helens is supplied with water from deep wells in the new red sandstone. The water, as drawn from these wells, is very hard, but is of a high degree of purity; it has a very low plumbosolvent power. The water before being distributed in the borough is softened by a liming process so that it loses from 10 to 11 degrees of hardness, the average hardness before softening being 21·0° Clark and after 10·2.

The following is an average result of the chemical and bacteriological analyses made during the year of the water as distributed in the town :—

#### CHEMICAL ANALYSIS.

Total Solids ...	30·1	parts per 100,000.
Loss on ignition ...	4·2	„ „
Ammonia, free ...	·005	„ „
„ albuminoid ...	·003	„ „
Chlorine ...	3·2	„ „
Oxygen consumed ...	·025	„ „
Nitrates ...	·18	„ „
Nitrates ...	Nil.	
Hardness :—Temporary	3·0°	Clark.
Permanent	7·2°	„
Total	10·2°	„

#### BACTERIOLOGICAL EXAMINATION.

Number of micro-organisms per C.C.

growing at 22°C	34.
Number per C.C. growing at 37°C	24.
No pathogenic organisms present.	

Samples were taken from the softening works daily, and tested as to their hardness. Each sample is obtained by allowing the softening water to drop for twenty-four hours into a glass vessel. At the end of this time the contents are well mixed, and in this way a true sample is taken. The following is the result of the daily test for hardness :—

		No. of Samples Tested.				Mean Hardness.
January	...	31	...	...	...	10·3
February	...	29	...	...	...	10·2
March	...	31	...	...	...	10·3
April	...	30	...	...	...	10·2
May	...	31	...	...	...	10·3
June	...	30	...	...	...	9·9
July	...	31	...	...	...	10·3
August	...	31	...	...	...	10·2
September	...	30	...	...	...	10·2
October	...	31	...	...	...	10·2
November	...	30	...	...	...	10·2
December	...	31	...	...	...	10·3
<hr/>						
Total	366		Mean for the year = 10·2.			

The average hardness of the unsoftened water was 21.0.

The amount of water used for domestic purposes in St. Helens is 2.4 million gallons daily or 25.5 gallons per head per day.

## **FACTORIES AND WORKSHOPS.**

The number of workshops on the Register at the end of the year was 293. The number of inspections made of these was 558, and in 62 cases written notices were served regarding sanitary defects. In addition, 11 inspections of workplaces and 3 inspections of factories were made under the Factory and Workshop Act, 1901. Further details of these inspections are set out in tabular form. The number of notices received from the Factory Inspector of commencement to occupy a factory or workshop and of sanitary defects was 229. The number of new workshops notified by this department to the Home Office was 5. The number of workshops given up was 7. The workshops are generally kept in a clean condition. The number of lists of outworkers received twice a year was four referring to 30 persons. The number of inspections of outworkers premises was 32. No outwork was received into infected or unwholesome premises, and no prosecutions were undertaken with respect to workers during the year.

There are 115 Bakehouses in the Borough, one being underground. The number of notices served was 26, of which 24 were complied with.

## FACTORIES, WORKSHOPS, LAUNDRIES, WORKPLACES, and HOMEWORK.

### 1.—INSPECTION.

*Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.*

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories ... ... ...	3	3	—
(Including Factory Laundries.)			
Workshops ... ... ...	558	62	—
(Including Workshop Laundries.)			
Workplaces ... ... ...	11	—	—
Total ... ...	572	65	—

### 2.—DEFECTS FOUND.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
<i>Nuisances under the Public Health Acts :—</i>				
Want of Cleanliness .. .. ..	50	48	—	—
Want of Ventilation .. .. ..	1	1	—	—
Overcrowding .. .. ..	—	—	—	—
Want of drainage of floors .. ..	—	—	—	—
Other Nuisances .. .. ..	7	7	—	—
*Sanitary accommodations	insufficient .. ..	—	—	—
	unsuitable or defective ..	—	—	—
	not separate for sexes ..	—	—	—
<i>Offences under the Factory &amp; Workshop Act :—</i>				
Illegal occupation of underground bakehouses (S. 101) .. .. ..	—	—	—	—
Breach of special sanitary requirements for bakehouses (SS. 97 to 100). .. .. ..	19	19	—	—
Other Offences .. .. ..	—	—	—	—
Total .. ..		75	—	—

\* Action is here taken under Sec. 22 of the Public Health Amendment Act, 1890, which has been adopted by the Council ; the standard of sufficiency and suitability of sanitary accommodation enforced however is the same as that of the Sanitary Accommodation Order of 1903, of the Home Office.

## 3.—HOME WORK.

Nature of Work.	Lists received from Employers.				Number of Addresses of Outworkers received from other Councils	No. of Inspections of Outworkers Premises.		
	Twice in the year.		Once in the year.					
	Lists.	Out-workers.	Lists.	Out-workers.				
Wearing Apparel :—								
Making, etc. ..	8	30	—	—	—	30		
File Making ..	—	—	—	—	1	1		
Total .. ..	8	30	—	—	1	31		

## 4.—REGISTERED WORKSHOPS.

Workshops on the Register (S. 131) at the end of the year.				
Workshops .. .. .. .. .. ..				178
Bakehouses .. .. .. .. .. ..				115
Total number of workshops on Register ..				293

## 5.—OTHER MATTERS.

Class.	Number.
Matters notified to H.M. Inspectors of Factories :—	
Failure to affix Abstract of the Factory and Workshop Act (S. 133) .. .. .. .. .. ..	7
Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts, but not under the Factory Acts (S. 5) .. .. .. .. .. ..	6
Other .. .. .. .. .. ..	2
Underground Bakehouses (S. 101) :—	
Certificates granted during the year .. .. .. .. .. ..	—
In use at the end of the year .. .. .. .. .. ..	1

## 6.—WORKSHOPS CLASSIFIED ACCORDING TO THE INDUSTRY.

Dress and mantle making ...	52	Flour Packer ... ...	1
Milliners ... ...	20	Herbal Brewer ... ...	1
Tailors... ...	11	Pearl Ash Manufacturer ...	1
Stocking Knitters ...	6	Seltzogene Charge Maker ...	1
Joiners, Builders, Cabinet-makers, Plumbers, &c. } 14		Tea Wrapping ... ...	1
Blacksmiths, Wheelwrights } 11		Drysalter ... ...	1
Coach Builders, Masons }		Bottling Stores ... ...	1
Weighing Machine Repairers 1		Lead Light Maker ... ...	1
Cloggers and Boot Repairers 48		Cab Washing ... ...	1
Cycle Makers ...	3	Rug Making ... ...	1
Coopers ...	2		
			178

## **MIDWIVES ACT.**

On the 1st January, 1908, there were 49 persons certified as Midwives under this Act, practising or resident in the area of the County Borough of St. Helens. During the year three new names were added to the list, and two left the district, leaving 50 at the end of the year. Of these, five are not in practice in the Borough, and two in practice in St. Helens are resident outside the boundary. No notices of attendance on individual cases in St. Helens by midwives resident outside were received during 1908.

### QUALIFICATIONS OF MIDWIVES.

QUALIFICATION.	RESIDENT IN ST. HELENS.		Living outside, but in practice in St. Helens.
	In practice	Not in practice	
<b>TRAINED.</b>			
Liverpool Lying-in Hospital ...	10	—	—
Obstetrical Society of London ...	7	3	—
Glasgow Maternity Hospital ...	—	1	—
C.M.B. Exam. ...	—	1	—
<b>UNTRAINED.</b>			
In bona-fide practice July, 1901 ...	26	—	2

Thus of the 45 midwives in practice in St. Helens, 28, or more than half the whole number, are untrained.

The following are the names and addresses of the certified midwives in St. Helens :—

### **Registered Midwives not in practice:**

No. on Roll.	Name.	Address.
15206	.. Emily Maria Farrar ..	.. Nurses' Home, Dentons Green.
7943	.. Cecily Highcock ..	.. 69, Greenfield Road.
4308	.. Ann Nicholson ..	.. 55, Chapel Street,
7324	.. Florence Annie Spencer ..	.. 83, Windlesham Road.
24963	.. Elizabeth Catherine Wright ..	.. "Willowdene," Dunriding Lane.

**Registered Midwives practising within the area  
of the Borough:**

No. on Roll.	Name.	Address.
2142	.. Elizabeth Barrow ..	.. 357, Sutton Road.
8397	.. Lydia Bate ..	.. 44, Hardshaw Street.
1468	.. Sarah Ann Brian ..	.. 18, South Street.
1932	.. Harriet Mary Cheetham ..	.. "Park Avenue," 9, Leslie Road.
3012	.. Eliza Clark ..	.. 141, Dentons Green Lane.
2050	.. Elizabeth Conley ..	.. 154, Westfield Street.
7620	.. Annie Corless ..	.. 8, North Road.
7349	.. Ann Crabtree ..	.. 17, Exeter Street.
3418	.. Mary Cunliffe ..	.. 40, Ormskirk Street.
3419	.. Mary E. Cunliffe ..	.. 40, Ormskirk Street.
20617	.. Mary Ann Ellard ..	.. 21, Park Road.
7284	.. Mary Finn ..	.. 48, Greenfield Road.
12579	.. Mary Ann Gallagher ..	.. 113, Cooper Street.
7889	.. Jane Hill ..	.. 41, Bates Crescent.
7371	.. Isabella Jackson ..	.. 99, Ashcroft Street.
2099	.. Maria Louisa Kenwright ..	.. 132, Peckers Hill Road.
16626	.. Elizabeth Lamb ..	.. 18, Chester Lane.
7511	.. Elizabeth Lancaster ..	.. 73, Newton Road.
1558	.. Mary Latham ..	.. 6, Taylor Street.
3209	.. Jane Leather ..	.. 234, Blackbrook Road.
16239	.. Winifred Alice Lloyd ..	.. 3, Bourne Street.
13289	.. Mary Marsh ..	.. 96, Peasley Cross Lane.
9802	.. Elizabeth Massey ..	.. 82, Albion Street.
8179	.. Amelia Penketh ..	.. 58, Campbell Street.
16629	.. Mary Ann Penketh ..	.. 20, Chester Lane.
1982	.. Charlotte Platt ..	.. 3, Platts Street.
15944	.. Elizabeth Rigby ..	.. 152, Robins Lane.
1422	.. Sarah Rigby ..	.. 18, Peckers Hill Road.
7748	.. Elizabeth Roberts ..	.. 14, Cairo Square.
1329	.. Ellen Roscoe ..	.. 174, Elephant Lane.
5134	.. Jane Robinson ..	.. 15, Parliament Street.
8044	.. Elizabeth Smith ..	.. 67, Derbyshire Hill Road
10487	.. Ann Spencer ..	.. Millbrook Cottages, Eccleston.
5258	.. Annie Swift ..	.. 2, Chain Lane.
7564	.. Ann Temple ..	.. 70, Parr Stocks Road.
7523	.. Ellen Thomas ..	.. 20, Woodville Street.
10018	.. Ann Unwin ..	.. 94, Westfield Street.
7559	.. Mary Walker ..	.. 293, Nutgrove Road.
2043	.. E. M. W. F. Ward ..	.. 71, Manor Street.
7659	.. Sarah Ward ..	.. 53, Kirkland Street.
7441	.. Ellen Waterworth ..	.. 47, Eldon Street.
5661	.. Mary Jane Welsby ..	.. 77, Balfour Street.
7561	.. Elizabeth White ..	.. 24, Canal Street.
7690	.. Alice Wilde ..	.. Clock Face.
1873	.. Catherine Wood ..	.. 170, Elephant Lane.

The object of the Act is to secure the better training of midwives and to regulate their practice. It set up a central authority called the Central Midwives Board, which has issued certain rules describing, in considerable detail, the duties and responsibilities of the midwives. The Town Council of St. Helens is the Local Supervising Authority over midwives practising within its area. Its duties comprise the general supervision of all midwives in St. Helens, the investigation of charges of malpractice, negligence or misconduct, the suspension of midwives from practice in certain circumstances, and the reporting of midwives to the Central Midwives Board in other cases.

The number of cases attended last year by the midwives was 3,184, of which 3,146 were cases within the Borough of St. Helens. Excluding the still births and miscarriages appearing on the midwives' books, we have 3,002 live births or 93·3 per cent. of all the births notified during the year. In 494 cases medical aid was summoned; so that in 77·9 per cent. of the cases of live birth in St. Helens, the midwives have sole charge.

#### WORK OF MIDWIVES DURING 1908.

Midwives.	CASES.			COMPLICATIONS.		
	In St. Helens.	Outside.	Total.	Requiring Medicalaid	Still- births.	Mis- carriages.
Trained (17)	1778	20	1798	301	58	22
Untrained (28)	1368	18	1386	193	53	11

The average number of cases therefore attended in 1908 by each midwife was 70·7, the trained midwives attending 105·8 each and the untrained 49·1. Medical aid was summoned in 15·5 per cent. of the cases,—in 16·7 per cent. of the cases of the trained midwives and in 13·9 per cent. of the cases of the untrained. Still births and miscarriages occurred in 4·5 per cent. of the midwives' cases—in 4·4 per cent. of trained midwives' cases and in 4·6 per cent. of the untrained.

In 16 cases notices were received from the midwives of the deaths of the mother or child occurring before the attendance of a registered medical practitioner; in 11 of these cases the infant had died, in 3 the mother, and in 2 both mother and child.

## RECORD OF WORK OF MIDWIVES IN PREVIOUS YEARS.

		1906	1907	1908
Total Cases Attended by Midwives	...	2965	3091	3184
Percentage of Live Births Registered	...	85.9	89.0	93.3
Number of cases where Medical Aid was Summoned ...	...	296	329	494
Percentage of Cases ...	...	9.9	10.6	15.5
Average Cases Attended	...	67.3	71.9	70.7
Trained	...	101.2	116.6	105.8
Untrained	...	44.6	48.0	49.1

Two Midwives were reported to the Health Committee under Section 8 of the Midwives' Act, 1902.

In the first case the charge made against the midwife was that she attempted to register as a live child, a child that was stillborn. After carefully considering the matter the Health Committee decided that as a *prima facie* case was not clearly made out, the circumstances would be best met by an admonition from them.

In the second case the charges made against the midwife were (a) that she took a dying infant from out of its home to the doctor's surgery, when she ought to have sent for the doctor, and (b) that she failed to report the case as one requiring medical help. After considering the circumstances and having received the explanation of the midwife, the Health Committee decided to warn the midwife that such proceedings would not be permitted in future.

The duties under this Act are most important, and upon the efficiency with which they are carried out largely depends the welfare of a very large proportion of women in childbirth.

Generally the result of the Act has been most satisfactory, and it is without doubt proving a great instrument for good in this town. The midwives themselves have, with only a few exceptions, co-operated heartily with the officials of the Local Supervising Authority in carrying out suggested improvements, and they have sought and welcomed the help and advice in their practice which the new conditions have afforded them.

## **INFANT HYGIENE.**

The low infantile mortality rate during 1908 has already been commented on. This section will describe the work done by the Health Authority for the preservation of infant life.

In the reports for the last two years the need for earlier information of birth was explained. The Notification of Births Act, 1907, which provides for such earlier information was adopted by the Council and came into force in St. Helens with the sanction of the Local Government Board, on the 7th January, 1908.

The Act provides,

- (1) That notice in writing of all births in the Borough be sent to the Medical Officer of Health, within 36 hours of the birth.
- (2) That this notice be sent by all persons in attendance on the mother at the birth or in attendance on her within six hours after the birth and also by the father if actually resident in the house at the time.
- (3) That all births, whether the child be alive or not, be notified if the pregnancy has lasted longer than 28 weeks.

Any person who fails to give notice of a birth is liable, on summary conviction, to a penalty not exceeding twenty shillings unless the Court is satisfied that he had reasonable grounds to believe notice had been duly given by some other person.

The notification of birth provided by this Act is, in addition, not in substitution of registration. The Council supply to medical practitioners and midwives addressed and stamped notices in the following form, made up in books of 50.

### NOTIFICATION OF BIRTHS ACT, 1907.

*To the Medical Officer of Health,  
Town Hall, St. Helens.*

*I hereby give you notice of the occurrence of a birth as follows :—*

*Name of Mother .....*

*Address .....*

*Date of Confinement..... Hour..... a.m.  
p.m.*

*Sex of Infant ..... Born living or dead.....*

*Full time or premature .....*

*Signed .....*

*Address .....*

*Date.....190 .....*

In the first year of working, and despite the confusion that generally exists with respect to it, this Act has done much good by securing for the Health Authority early information of births. This is all the more gratifying as the greatest part of the duties imposed by it is placed on professional attendants of the mother who are unpaid for the additional work. The notifications were usually received from the midwives who, as explained in the report of last year, had become accustomed to furnishing the Medical Officer of Health with a weekly list of births attended.

#### PERSONS NOTIFYING BIRTHS, 1908.

TOTAL NUMBER OF BIRTHS NOTIFIED, 3422.

No. notified by midwives	...	2937
No. notified by doctors	...	136
No. notified by parents	...	70
No. notified by doctor and midwife	...	173
No. notified by midwife and parent	...	90
No. notified by doctor and parent	...	16

Stillbirths were notified in 164 cases; in 123 the child had passed the 28th week of pregnancy, while in 41, this date had not been reached. Notifications of 42 births outside the borough were received. The number of cases in which late notifications were received was 133.

#### INTERVAL BETWEEN BIRTH AND RECEIPT OF NOTIFICATION.

First week. Under 2 days. Over 2 days.	Second week.	Third week.	Fourth week.	Second month.	Third month
3289	50	32	12	9	25

The Act provides that any Registrar of Births shall at all reasonable times have access to notices of births received by the Medical Officer of Health under the Act, and the Registrar of St. Helens has taken full advantage of this. The cases notified late were usually only discovered on the registration of the birth.

The attendants on the mother in the cases late notified were medical practitioners in 52 cases, midwife in 45, relation of mother in 24, and a neighbour in 12 cases. In these cases the failure to notify was brought under the notice of the persons in attendance on the mother, but no legal

action was taken in relation thereto. Whether the time has arrived when such action should be taken is a matter for consideration, but from the still considerable proportion of births that are not notified within two days it is believed that the Council is not yet in a position to discontinue receiving from the Registrar, the weekly list of births registered, as this forms a check on the notifications. The weekly lists of births received from the Registrar cost the Council about £26 a year. The notifications received under the Notification of Births Act, 1907, has last year cost the Corporation about £12.

St. Helens forms part of the district of the Prescot Union for the whole of which the Guardians provide a workhouse at Whiston, which is outside the Borough. With the help of the Local Government Board, arrangements were made for the notification of births which had taken place in the workhouse when the mother and child were later taking up residence in the borough. These form an important class of births specially requiring the supervision of the municipal visitors. Twenty of these notifications were received.

The methods adopted in the preservation of infant life were described in the report of 1907. With few exceptions each birth is visited as early as possible by a trained nurse, who is also a certified midwife. The visit is almost invariably welcomed, especially when it is the first baby. The mother is encouraged to talk about her family, and the visitor tries to form in her own mind an estimate of the peculiar danger to which this baby will be exposed, and when the risks of its life and health seem great the case is marked for further visiting. The baby is weighed in all cases and particulars of the general condition and weight are noted for further reference. The importance of early visitation lies in the fact that the mother may give up breast feeding or form habits detrimental to the infant, and this may be prevented by timely advice.

Efforts are constantly being made to get the certified midwives interested in the work, and these efforts have not been without success. Some years ago few midwives indeed regarded the care of the new born infant as a part of their duty, but now the majority of them understand their responsibility in this matter, and endeavour to aid the Town Council in its work.

The number of visits paid during 1908 by the infant visitors was 3,892, while the number of babies under observation was 2,885. In 206 cases where the births of live children were notified, it was for some reason or other deemed unnecessary to make a visit, while in 73 cases the patient had

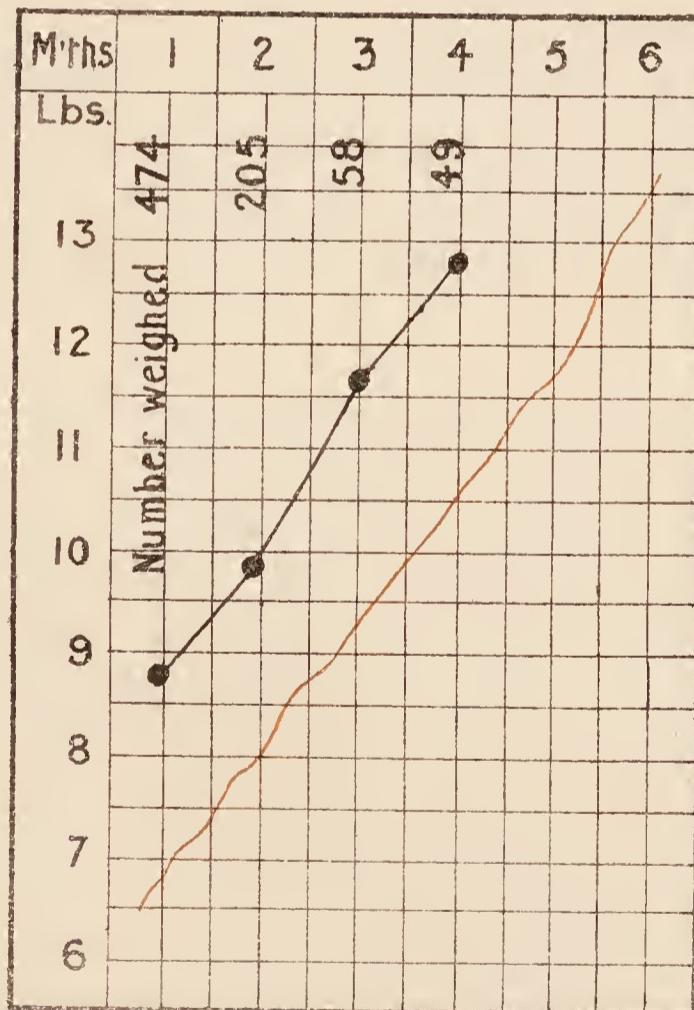
removed and could not be found. The great majority of the first visits were paid in the first three weeks of the infant life ; this is seen in the following table in which the figures for 1907 are placed for comparison.

AGE OF BABIES WHEN FIRST VISITED.

Age.	Weeks.				Months.				
	-1	-2	-3	-4	-2	-3	-4	-5	-6
1907 . . .	10	31	149	959	1415	131	10	3	1
1908 . . .	462	986	671	373	207	97	53	36	—

The advantage therefore gained by the adoption of Notification of Births Act has been great, for the earlier visitation secured has, no doubt, helped to reduce the infantile mortality.

The average weights of the infants is seen in the following chart.



Average English Baby in red. Average St. Helens Baby in black.  
(St. Helens babies weighed in clothes of about  $1\frac{1}{4}$  lbs.)

The high percentage of breast feeding in St. Helens is still maintained, 2,751 or 95.3 per cent. of the infants being breast fed. 18 or 0.6 per cent.

being partly breast and partly hand fed, and 116 or 4·0 per cent. being wholly hand fed. The results of previous years shows a very satisfactory progressive increase in the amount of breast feeding.

METHODS OF FEEDING IN PREVIOUS YEARS.

	1905	1906	1907	1908
No. of Infants visited ..	2263	2428	2602	2885
Percentage Breast Fed ..	87·6	88·6	91·9	95·3
,, Partly Breast and partly Hand Fed ..	3·4	4·1	3·2	0·6
Hand Fed ..	9·0	7·3	4·8	4·0

The earlier visitation of births last year may account to some extent, for an increase in breast feeding, more apparent than real, by counting as breast fed, infants who, a few weeks later, become hand fed, but the error thus arising is not believed to be appreciable.

A careful record of the means of feeding has been kept in the case of 254 infants who died ; it was found that 200 or 78·7 per cent. of these were wholly breast fed, 3, or 1·2 per cent. were partly breast and partly hand fed, and 51, or 20·1 per cent, wholly hand fed. Comparing these figures with the preceding figures as to the feeding of infants in the borough, the infantile mortality rate among wholly hand fed infants will be found to be 577 per 1,000, among partly hand and partly breast fed, 222 per 1,000, while among the infants wholly breast fed, the infantile mortality rate was only 95 per 1,000.

These figures correspond closely with those given in previous years, and they are deserving of most careful attention. It is difficult to appreciate at first sight their significance, but to put them in common words they mean that if a mother takes her infant off the breast that infant will probably die before it is a year old, its chance of living one year being not so good as the probability of its death, while on the other hand, if a mother keeps her infant on the breast it will probably live, its chance of living one year being nine times greater than the probability of its death. It must not be forgotten, however, that when a baby is breast fed great injury to its health, and that of the mother, may result from the irregularity with which it is fed, as many mothers put the baby to the breast merely as a means of soothing the infant.

In order to determine the duration of breast feeding, in 611 cases inquiry was made as to when the previous baby was weaned. The result shows that about one per cent. of the infants who were breast fed at birth

were weaned before they were six months old, and that the most frequent time of weaning in this town was between 9 and 18 months of age.

#### AGE OF BABY WHEN WEANED.

	Under	Months.					Over.	
Age .....	6 mths.	6—9	9—12	12—15	15—18	18—24	24 mths.	T'1.
No. of Infants	7	63	132	199	122	73	15	611

Note was made in the report of last year of the extent to which infantile insurance was carried in St. Helens. The figures for this year compare favourably with those of last, as they show some decrease in this practice which, however much to be commended on the ground of forethought and prudence, does not act in a beneficial fashion to the infant itself. It is not that the parents wish the infants to die but in many cases the parents wish to profit, as much as possible, by what they regard as the infant's unavoidable death. A recent case came under notice in which a premature weakly infant only lived a few hours, but during that time, despite the fact it was in the early morning, the life was successfully insured for a considerable sum.

#### INSURANCE OF INFANTS UNDER 1 YEAR.

	1907.	1908.
No. of Infants .....	1903 .....	2838
Number Insured .....	1556 .....	2048
Percentage Insured ...	80·6 .....	72·1

The amount for which the insurance was effected varied from 15/- to £3.

*Infant Milk Depot.*—In August. 1899, the Town Council, after careful consideration of the main causes of infantile mortality in St. Helens decided to open an Infant Milk Depot in order to provide those infants, who for some reason or other, were deprived of breast milk, with milk as nearly akin to their natural food as possible.

The Infant Milk Depot has passed through many trials in the course of its short existence, but it has served a most useful purpose and has, without doubt, saved many lives in St. Helens. During all the time it has been at work the local authority has not ceased to advocate breast feeding in preference to any other kind of feeding, and as a result the proportion of infants fed on the breast has much increased (see page 74).

The number fed on depot milk was 124, and in addition to this number four infants outside the borough were, by arrangement, supplied with

depot milk. Of the number from St. Helens eight died, the causes of death being certified by the medical attendants as follows :—Whooping cough, 1 ; marasmus, 2 ; meningitis, 1 ; malnutrition, 2 ; convulsions, 2. If all the infants had been fed for a year on the depot milk this would give an infantile mortality rate among those fed of 84 per 1,000 as against 155 per 1,000 for the whole borough. This, however, is not a correct index of the value to be attached to the depot, because on the one hand many of the depot infants are ill when first fed on the milk, while on the other no corrections for the time the infants were on the depot have been made. The ages of the infants from St. Helens when brought to the depot were as follows :—Under one month, 25 ; between one and two months, 19 ; between two and three months, 19 ; between three and six months, 22 ; and over six months, 23.

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## **MISCELLANEOUS.**

**Black Smoke.**—The total number of observations of chimneys taken in 1908 was 137, and in 11 or 8·02 per cent. black smoke was emitted for a longer period than five minutes continuously. The percentage of offences to the number of observations in each year is as follows :—1903, 22·1 ; 1904, 16·9 ; 1905, 14·9 ; 1906, 11·7 ; 1907, 11·7 ; 1908, 8·02. Although the number of observations is small, it would seem that in recent years considerable improvement has taken place in this matter in St. Helens.

**Offensive Trades.**—There are seven offensive trades in the Borough established with the sanction of the Local Authority and carrying on business as follows :—4 tripe boilers, 1 gut scraper, 1 fat boiler, and 1 manure manufacturer. The premises where these trades are carried on were systematically visited during the year, 23 inspections being made, but no serious cause of complaint was noted.

**Special Reports.**—During the year several reports dealing with special subjects were presented to the Committee at their fortnightly meetings. The subjects dealt with and the resolutions arrived at are generally described in this report, but the more important of these special reports were as follows :—Housing (10 reports), Common Lodging Houses (2 reports), Houses let-in-lodgings, Housing and Town Planning, Inspection of Cattle and Cowsheds, Offensive Trades (2 reports), Shop Hours Act, Midwives Act, Infringement of Rules by Midwives (2 reports), Notification of Births Act, Scarlet Fever, Enteric Fever in Rodney Street, etc.

**RAINFALL**

AT ECCLESTON HILL WATER WORKS FOR 30 YEARS.

	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888
January ..	*	.49	.08	2.72	2.58	3.51	1.78	3.99	0.98	0.93
February ..	*	.80	4.17	1.73	3.38	2.33	2.35	0.80	0.61	0.61
March ..	1.42	1.37	2.41	2.15	.53	2.49	1.94	1.84	1.33	1.89
April ..	1.11	.66	1.23	1.06	1.09	1.07	1.38	1.12	1.06	1.09
May ..	1.58	1.90	3.35	1.71	.68	0.82	2.14	4.25	2.03	0.66
June ..	3.10	2.15	2.60	6.07	2.90	2.11	3.32	1.68	0.91	2.54
July ..	4.53	5.82	3.47	5.27	3.32	3.30	1.91	3.03	1.17	6.87
August ..	5.15	2.38	6.60	4.41	2.25	2.02	1.98	1.74	1.50	3.31
September ..	3.77	2.90	2.46	3.10	6.41	3.09	4.58	3.47	5.36	1.56
October ..	2.07	3.13	3.14	3.00	5.81	1.49	5.99	4.05	2.37	1.85
November ..	.64	2.03	2.91	3.43	2.60	1.57	3.18	3.04	1.17	4.98
December ..	.61	6.16	4.30	2.12	1.65	3.12	2.18	4.00	2.61	1.89
Totals ..	24.37	29.79	36.72	39.77	33.20	26.92	32.73	33.01	21.10	28.18

\* Gauge broken.

	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898
January ..	0.65	3.17	1.01	1.80	0.89	1.87	2.06	1.13	1.11	2.05
February ..	1.53	0.19	0.08	1.54	3.07	4.02	0.04*	1.54	2.35	1.91
March ..	1.27	2.28	0.76	0.73	0.77	2.21	0.89	2.94	2.09	0.73
April ..	1.92	1.31	1.95	1.15	0.39	1.59	1.74	1.48	2.27	1.40
May ..	2.47	1.58	2.13	3.36	1.30	2.48	0.54	0.51	1.33	3.88
June ..	0.35	2.27	3.39	4.08	1.74	2.23	0.82	3.83	3.52	2.87
July ..	2.98	2.43	3.26	3.20	3.32	3.66	3.72	1.92	1.15	0.52
August ..	4.75	3.67	6.50	4.15	2.79	4.77	3.31	3.18	4.88	4.54
September ..	2.25	1.48	2.92	3.80	3.85	0.72	1.17	6.28	4.90	1.28
October ..	2.84	2.09	3.49	6.25	2.18	3.79	5.13	3.18	1.88	4.55
November ..	2.49	6.41	2.92	2.44	1.88	2.56	2.65	1.31	4.61	2.42
December ..	2.39	0.14	3.93	1.96	3.55	3.44	2.88	4.56	3.99	2.84
Totals ..	25.89	27.02	32.34	34.84	25.73	33.34	25.35	31.86	34.08	28.99

	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
January ..	3.84	4.29	2.13	0.36	2.36	2.55	1.05	4.02	1.19	1.96
February ..	1.82	2.65	1.08	1.51	1.97	3.17	1.52	2.61	1.00	2.83
March ..	2.34	*	1.56	2.03	2.11	1.25	3.16	2.02	2.32	2.59
April ..	3.27	1.53	2.14	1.96	1.86	1.36	2.46	1.48	0.98	2.51
May ..	3.28	1.36	0.78	3.82	3.21	1.92	0.59	2.60	3.35	2.85
June ..	2.03	2.36	1.72	1.49	1.79	1.96	2.05	2.12	5.74	1.65
July ..	2.37	0.93	1.40	1.75	4.16	0.76	1.91	1.22	4.01	4.14
August ..	1.49	5.67	2.78	2.51	4.43	4.28	3.33	3.27	3.83	3.46
September ..	4.17	0.83	0.95	1.18	4.68	2.56	1.71	2.45	0.72	3.68
October ..	3.03	3.66	3.68	3.39	7.70	1.86	3.43	5.79	3.52	2.31
November ..	0.56	3.31	3.42	1.95	3.60	1.28	3.64	2.13	3.26	3.12
December ..	1.89	2.96	3.86	2.26	1.47	2.27	0.50	3.57	2.93	1.36
Totals ..	30.09	29.55	25.50	24.21	39.34	25.22	25.35	33.28	32.85	32.46

\* Rain Gauge out of order.

WEEKLY RECORD OF METEOROLOGICAL CONDITIONS TAKEN AT  
 VICTORIA PARK.

WEEK ENDING.	Mean Barometer. in inches.	Maximum Temp.	Minimum Temp.	Mean Temp. (4 feet.)	Rainfall (total ins.)	WIND								Force of Wind.			
						Direction of Wind.								Total Mileage	Mas- mille- age hour.	Ma- Gu.	
						Number of Hours per Week.											
N	NE	E	SE	S	SW	W	NW										
Jan. 4	ins.	°	°	°	°	ins.											
" 11	29.977	36.0	23.0	32.1	44.3	.00	½	24½	99½	19	..	..	..	..	712	12	12
" 18	29.825	52.0	18.0	34.6	43.8	.75	..	2½	6	½	8	24½	9½	8	86	6	6
" 25	29.862	54.0	24.0	40.4	43.1	.62	½	½	8½	44	45	33	11	1½	1205	24	38
Feb. 1	30.174	46.0	27.0	34.3	42.2	.05	..	..	4	7	..	5	6	2	1896	20	36
" 8	29.624	53.0	30.0	41.1	40.5	1.02	10½	..	..	..	1	20½	59	42	3148	36	54
" 15	30.169	49.0	30.0	41.4	40.7	.17	31½	..	..	..	5	4	57	65½	2576	30	40
" 22	29.067	48.0	33.0	42.8	40.6	.35	..	..	9	21½	11	25	63½	33	2019	22	32
" 29	29.512	51.0	35.0	43.8	41.0	.84	..	..	..	8½	6½	15½	82½	55	3471	44	77
Mar. 7	29.359	52.0	30.0	41.6	40.0	.92	7½	..	..	..	..	6½	81½	63½	3689	34	54
" 14	29.382	46.0	27.0	36.6	40.0	.31	19½	28	10½	12½	10½	3	5½	18½	2366	30	46
" 21	29.510	56.0	29.0	41.1	40.0	.52	2½	½	17½	30½	8½	23	39	33	2549	34	50
" 28	29.696	54.0	34.0	42.7	40.9	1.29	..	..	5	38	30½	17	30½	33½	1920	30	40
Apr. 4	29.602	53.5	38.0	45.4	42.0	.44	4½	..	..	3	29½	35½	32	22½	3018	30	44
" 11	29.932	58.0	31.5	43.2	43.0	.07	26½	14	24	22½	..	..	9½	39½	1714	20	33
" 18	30.037	61.0	33.0	45.1	43.0	.00	16	42	56½	3½	..	..	..	..	2288	30	44
" 25	29.476	50.5	27.5	39.1	43.5	.39	30	13	28	10½	13	5	10	40½	1858	22	33
May 2	29.703	65.2	31.5	47.0	43.6	2.35	7½	2½	31½	47½	12½	8½	8	21	1810	28	40
" 9	29.502	71.5	43.0	53.3	45.1	2.07	..	.	14	36	44	22½	37½	6½	2104	24	33
" 16	29.609	61.0	42.0	51.5	47.1	.71	2½	1	16	44	24½	18½	27	14½	1452	20	22
" 23	29.983	67.5	42.5	55.2	48.6	.16	7½	..	..	2½	26	40½	44	38½	1968	24	33
" 30	30.029	72.5	41.5	56.6	49.7	.17	9	19	39	10½	9½	25½	30½	17	1680	20	33
June 6	29.871	79.0	44.5	61.3	51.3	.72	9½	6½	38½	26½	13	2½	18½	30	1474	20	33
" 13	29.930	66.5	46.0	55.0	52.4	.29	..	..	..	1	32	35	7½	19½	1916	20	33
" 20	29.657	63.0	43.5	52.2	52.5	1.04	7	5	22	18½	11	24½	29	30	1614	20	33
" 27	30.142	73.0	43.5	57.9	53.1	.00	4	3½	33½	28	6½	2½	22	53	940	14	22
July 4	30.155	82.2	51.0	66.7	54.6	.00	3	7	88	34½	4	4	5½	13	858	14	1
" 11	29.659	71.0	46.0	59.3	55.8	1.41	..	1½	19½	34	21	27½	41½	23	1534	22	33
" 18	29.504	68.0	47.0	57.7	56.1	2.22	12½	..	..	3	17½	23½	41½	45	1770	24	33
" 25	29.947	73.0	49.0	60.7	56.6	.18	5	..	2	14	24½	17½	48½	46½	830	16	22
Aug. 1	30.127	82.2	49.0	60.6	57.2	.44	1½	7	3	6½	13½	11	62½	62	548	16	22
" 8	30.043	71.0	49.5	59.7	57.8	.02	21	1½	..	3	3	7	57	51½	Out of Order	do	do
" 15	29.871	68.5	49.5	57.5	58.0	.28	1	2	23½	6	6½	21	60	45	do.	do.	do.
" 22	29.905	70.0	47.5	58.6	57.6	1.22	1	16	96½	18	5½	42½	10½	16	do.	do.	do.
" 29	29.425	66.0	50.5	58.2	57.2	1.71	..	..	..	5½	26	45½	61½	9½	do.	do.	do.
Sept. 5	29.636	62.0	40.0	51.8	56.7	.90	9	10	17	16	21½	21½	40	33	1470	24	33
" 12	29.610	67.0	36.0	54.1	55.9	.73	4½	2	6½	15½	19½	24½	42½	33	1426	20	33
" 19	29.859	70.0	44.0	55.6	55.1	1.85	..	..	7½	28½	62½	34	21	5½	1090	16	22
" 26	29.747	67.2	44.5	56.7	55.0	2.89	2½	11½	53½	34	24	7½	22½	9½	980	20	22
Oct. 3	29.914	77.5	47.0	63.2	55.2	.00	1	½	27½	90	37½	8	2½	1	486	14	22
" 10	29.927	76.0	48.0	58.7	56.0	.20	3½	1	36	66½	28	12½	9½	11½	946	14	33
" 17	29.861	67.5	47.0	56.2	55.7	.01	..	..	43	67½	36½	1	..	..	790	12	II
" 24	30.008	59.0	37.0	49.9	54.8	1.68	12	11½	83½	47½	2	3½	4	4	1236	20	33
" 31	29.914	62.0	32.0	48.3	53.4	.68	14	15	50	53½	8½	7½	9½	10	996	24	33
Nov. 7	29.899	60.0	38.0	48.3	53.0	.00	..	..	58	83	7	..	..	..	648	10	II
" 14	29.653	58.0	28.5	43.5	51.9	.59	2	1½	50½	38	18½	4½	3½	13½	844	14	22
" 21	29.920	51.0	31.0	42.7	50.5	.57	1½	5	6	24½	15½	8	32½	21	1294	20	33
" 28	29.704	54.5	38.5	47.4	49.5	2.19	..	½	1½	20	40½	22½	62	12	2100	26	33
Dec. 5	30.059	55.5	31.5	39.2	48.8	.20	..	..	36	64½	26½	4	..	..	618	8	I
" 12	29.400	52.2	31.5	40.9	48.1	.70	..	1	8	8	58	30	33½	29½	1362	20	33
" 19	29.322	44.0	37.0	43.1	47.0	.49	..	..	13	61½	54½	15½	18½	6	952	16	22
" 26	29.914	52.5	30.0	42.5	46.5	.31	..	2	25½	92½	42	6	..	..	822	14	22
Jan. 2	29.931	48.0	18.0	30.9	45.7	.30	..	..	28	89½	38	3	..	..	1236	20	33
Totals						37.37	303½	282½	1296	1499½	1024½	774½	1474½	1189	Highest reading		
Mean	29.797	60.8	37.2	48.7	49.0										3689	36	

**SANITARY WORK.**

## NOTICES.

NUMBER OF SANITARY NOTICES SERVED.	1900	1901	1902	1903	1904	1905	1906	1907	1908
To clean choked drains and w.c.'s ..	331	361	375	446	346	387	477	459	502
,, repair or relay defective drains ..	250	241	157	157	73	169	161	109	112
,, drain dwelling-houses ..	3	6	4	7	5	10	0	—	—
,, disconnect and ventilate drains ..	270	228	253	393	107	137	155	140	60
,, disconnect downspouts ..	109	175	33	95	45	32	26	24	35
,, repair or lengthen w.p. to slopstones ..	94	85	54	51	60	64	47	59	139
,, provide w.p. to slopstones ..	40	35	25	22	29	43	23	16	33
,, , slopstones ..	53	62	57	21	12	21	41	34	44
,, repair w.c.'s, baths, basins, and lavatories ..	48	34	27	38	38	70	47	76	123
,, repair roofs of dwelling-houses ..	182	181	108	169	56	119	107	98	154
,, cleanse backyards, privies, & passages ..	46	28	27	16	39	50	36	41	76
,, , and whitewash filthy dwellings ..	23	14	18	45	19	33	62	31	42
,, provide doors to privies, pail closets, and ashpits ..	385	298	278	301	459	476	228	393	438
,, repair or re-hang doors to pail closets, ashpits and privies ..	299	259	96	712	370	289	105	202	321
,, repair privies and ashpits ..	70	86	76	68	48	129	85	109	91
,, , eaves and downspouts ..	124	75	75	103	67	121	133	137	167
,, provide ,,, ..	41	32	50	51	244	115	59	95	90
,, repair pavement, etc., backyards ..	371	298	224	197	218	213	165	211	398
,, cut gutters ..	..	..	..	..	..	204	36	81	8
,, repair pavement and floors in dwelling-houses ..	69	73	61	20	34	59	76	75	100
,, remove fowls, pigeons, etc., from dwellings ..	6	3	4	3	—	9	9	8	19
,, remove pigs ..	31	21	19	9	12	23	13	10	15
,, , rubbish ..	48	24	7	3	9	24	20	18	46
,, , manure ..	16	20	18	8	10	17	11	12	20
,, reconstruct middensteads ..	11	26	11	25	6	4	23	8	14
,, clean foul ditches and cesspools ..	45	41	43	21	9	28	22	17	6
,, provide or repair ashboxes ..	170	116	165	719	786	536	264	527	532
,, overcrowding ..	23	26	18	42	10	20	29	12	30
,, plaster walls or ceilings of dwellings ..	108	152	70	72	35	79	86	62	173
,, prevent dampness in dwellings ..	25	57	53	13	29	25	26	22	41
,, remove sheds, etc., from backyards ..	..	33	11	7	12	10	9	8	5
,, remedy defects in bakehouses ..	2	4	24	40	6	24	23	25	35
,, , workshops ..	7	5	15	14	2	15	10	16	39
,, , cowsheds & dairies ..	..	31	12	1	3	21	10	24	1
,, provide water supply ..	9	13	14	11	16	11	..	..	—
,, miscellaneous ..	175	164	156	84	101	173	153	170	257
,, fcnl ashpits to be reconstructed to w.c.'s	135	87	102	160	71	102	118	381	264
Totals .. .. ..	3619	3394	2740	4144	3454	3862	2895	3508	4430

**Nuisances.**—The foregoing table gives some indication of the work of the Inspectors during the year with respect to nuisances. It only, however, has reference to a part of their work in this matter, as much of it is done without having resort to the service of a notice. The number of notices served is greater than in any previous year. As pointed out in previous reports difficulty has been found in remedying certain drainage nuisances in some parts of the Borough from the want of a proper drainage system, and it is pleasing, therefore, to note the progress of the sewerage scheme for Parr and East Sutton, which will complete the work of draining the Borough.

**Conversions.**—The number of conversions of sanitary conveniences to the Water Carriage System carried out last year, by order of the Council, was 271. This is done under section 80 of the St. Helens Corporation Act, 1898, which provides (1) that the Corporation may require any privy ashpit in the Borough to be converted to the water carriage system, whether it is giving rise to a nuisance or not, at the whole expense of the owners, and (2) that the Corporation may similarly require the conversion of sanitary conveniences on the tub and pail system, if these are creating a nuisance. If the convenience on the tub and pail system is not creating a nuisance, the conversion may still be carried out by the Corporation, who can, however, in this case, only recover from the owner half the expenses incurred. In most instances the owners carry out the notice of the Corporation without trouble, but cases arise where it is necessary to get tenders and do the work at the expense of the owners. The number of these cases last year was 44, and in them the Chief Inspector of Nuisances was able to arrange the carrying out of the work and supervise it without undue friction with the owners. Of the total number so converted by the Corporation, 43 were privy ash pits, and one pail closet. The total cost of the work not paid for on completion by the owners was £318/6/6, all of which is recoverable.

**SANITARY RETURN FOR 1908.**

The following table shows the present position of the Borough with respect to the nature of the sanitary conveniences attached to the houses :—

Number of Houses with Pail Closets attached at end of 1907	..	7150
Number Demolished during 1908	...	
,, Converted to Water Closets, 1908	..	29
Number at end of 1908	...	7120
Number of Pail Closets at end of 1907	..	7009
Number Demolished during 1908	...	
,, Converted to Water Closets, 1908	..	24
Number at end of 1908	...	6980
Number of Houses with Old Ashpits attached at end of 1907	..	5073
Number Demolished during 1908	...	
,, Converted to Water Closets, 1908	..	242
Number at end of 1908	..	4826
Number of Old Ashpits in use at end of 1907	..	3130
Number Demolished during 1908	...	
,, Converted to Water Closets 1908	..	140
Number at end of 1908	...	2984
Number of Houses with Water Closets attached at end of 1907	..	6105
Number Converted from Pail System during 1908	...	29
,, " Old Ashpit	..	242
,, of New Houses built during 1908	..	127
Number at end of 1908	..	6503
Number of Houses with Closets on No. 2 System	...	81
Total Number of Houses at end of 1908 :—		
Tub and Pail System	..	7120
Old Ashpit	..	4826
Water Closet.	..	6503
No. 2	..	81
TOTAL	...	18530

## SUMMARY OF DEPARTMENTAL WORK.

**DISTRICT INSPECTORS.****Infectious Diseases:**

	Central.	North Eccleston.	South Eccleston.	Parr.	East Sutton.	West Sutton.	Hardshaw.	North Windle.	South Windle.	Total.
Visits of Enquiry .. ..	91	248	195	121	188	98	155	140	102	1338
Removals to Hospitals .. ..	58	182	143	73	94	51	101	78	55	835
Re-inspections .. ..	21	47	42	73	85	35	72	68	47	490
Intimations to Schools .. ..	85	238	164	147	207	114	71	135	130	1291
Houses Disinfected .. ..	66	191	164	78	101	59	117	100	62	938
Sets of Beds, &c., Disinfected .. ..	60	183	157	77	101	55	117	94	61	905

**Nuisances:**

Inspections .. ..	1103	958	833	1300	871	779	1138	846	901	8729
Complaints .. ..	20	16	10	67	79	39	80	39	38	388
Preliminary Notices .. ..	195	224	219	258	154	134	336	133	180	1833
Statutory Notices .. ..	86	64	58	111	62	44	118	46	93	682
Abated .. ..	146	212	159	196	104	81	289	86	121	1394

**Black Smoke:**

Observations .. ..	5	..	13	51	18	26	17	7	..	137
Intimations .. ..	..	..	..	..	8	2	..	1	..	11
Replies .. ..	..	..	..	..	8	2	..	1	..	11

**Common Lodging Houses:**

Inspections .. ..	112	..	..	19	6	5	73	..	..	215
Notices .. ..	5	..	..	..	..	..	12	..	..	17
Abated .. ..	3	..	..	..	..	..	10	..	..	13

**Noxious Trades:**

Inspections .. ..	8	..	..	..	5	..	1	9	..	23
Notices .. ..	..	..	..	..	..	..	..	..	..	..
Abated .. ..	..	..	..	..	..	..	..	..	..	..

**Dairies, Cowsheds, & Milkshops**

Inspections .. ..	10	17	6	24	27	7	46	62	39	238
Notices .. ..	..	..	..	3	..	..	..	..	..	3
Abated .. ..	..	..	..	3	..	..	..	..	..	3

**Slaughter Houses:**

Inspections .. ..	79	13	..	..	156	..	52	..	..	300
Notices .. ..	1	1	..	..	..	..	..	..	..	2
Abated .. ..	1	1	..	..	..	..	..	..	..	2

**Food and Drugs:**

Visits to Shops .. ..	20	26	15	13	26	9	46	23	25	203
Samples Taken .. ..	20	28	17	13	28	9	50	23	26	214
Proceedings .. ..	..	..	..	..	..	..	..	..	..	..

**Factory and Workshops:**

Inspections .. ..	94	69	66	47	80	26	93	95	98	668
Visits to Home Workers .. ..	3	3	4	..	..	..	10	3	10	33
Notices .. ..	6	7	7	2	13	6	11	3	13	68
Abated .. ..	7	2	5	1	5	4	10	2	13	49

**Drain Tests:**

Old Drains .. ..	9	41	53	..	11	1	13	7	41	176
Preliminary Notices .. ..	5	5	6	..	4	..	6	2	..	28
Statutory Notices .. ..	..	..	2	..	..	..	1	..	6	9
New Drains .. ..	30	38	99	21	41	36	77	45	38	425
New Drains Retested .. ..	7	3	22	3	2	5	4	6	5	57

**WOMEN INSPECTORS.****Infant Feeding:**

Visits .. ..	356	749	629	1081	477	246	321	515	306	4680
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**Dirty Houses and Children:**

Cases dealt with .. ..	15	77	55	149	21	29	21	20	14	401
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**Schools:**

Visits .. ..	24	17	22	64	23	21	5	19	19	214
Intimations .. ..	16	31	11	81	23	22	1	6	2	193

**Disease:**

Visits .. ..	252	526	405	1072	429	308	111	140	162	3405
Re-inspections .. ..	..	..	..	..	..	..	..	..	..	..
Disinfections .. ..	..	..	..	3	2	10	1	1	..	17

**Midwives' Act:**

Inspections .. ..	13	13	17	40	10	7	7	20	4	131
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Intimations .. ..	22	78	98	150	56	44	30	64	27	569
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## **CANAL BOATS ACT.**

The following is a copy of the Annual Report of the Inspector under this Act to the Local Government Board :—

In compliance with Section 3 of the Canal Boats Act, 1881, I have to present to you my Annual Report as to the execution of the Canal Boats Acts, 1877 and 1884, for the year ending 31st December, 1908.

(1) The Corporation of St. Helens have appointed me to be Inspector under the Canal Boats Act, in addition to my duties as Borough Engineer. No special remuneration is made for my duties under the Canal Boats Acts.

(2) The number of boats inspected during 1908 was 4, against 7 in 1907. There were no infringements of the Acts and Regulations on any of the boats inspected. The number of persons housed on board the four boats was 17; 11 males, 3 females, and 3 children, an average of 4·25 persons per boat. None of these children were of school age. All the boats were registered for five persons.

(7) No boats were detained for cleansing or disinfection.

(8) No boats are at present on the Register.

(9) No boats were registered during 1908.

I am, Gentlemen,

Your obedient servant,

GEO. J. C. BROOM,

Canal Boats Inspector for the County Borough  
of St. Helens, Registration Authority.

## **PLANS.**

### **Plans Deposited and Approved by the Health Committee.**

	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
For Dwelling-houses	386	284	293	370	677	626	353	509	299	206	128
,, Other Buildings	22	23	21	12	23	34	21	17	25	18	8
,, Alterations to Existing Buildings}	46	47	52	81	27	128	85	43	43	34	34
Total.....	454	354	366	463	727	788	459	569	367	258	170

The following Table shows the several Wards of the Borough in which Buildings have been erected during the years mentioned :--

Year.	Eccleston North	Eccleston South	Central	Windle North	Windle South	Hardshaw	Sutton, East	Sutton, West	Parr	Total
1899	19	6	2	42	7	27	42	11	80	236
1900	38	56	—	28	11	21	16	9	85	264
1901	26	77	8	27	1	60	27	35	54	315
1902	20	53	5	14	1	29	72	11	54	259
1903	67	84	8	37	18	43	100	23	38	391
1904	105	53	7	37	16	47	59	1	70	395
1905	19	93	1	44	13	90	42	10	54	366
1906	11	51	—	31	—	31	73	24	39	260
1907	22	38	—	26	2	22	77	3	29	219
1908	2	52	—	4	—	27	22	—	20	127

## STREETS.

### **Sewering, Draining, Levelling, Flagging, Paving, Channelling, and Completing.**

Morgan Street, from Parr Stocks Road to Sankey Street.

Morris Street.

Gaskell Street, from Parr Stocks Road to Caldwell Street.

Carnegie Street.

Crouch Street.

Farnworth Street, from Bolton Street to Pocketnook Street.

French Street.

Exeter Street, from Windsor Road to Rivington Street.

Allanson Street, from Parr Stocks Road to Sankey Street.

Recreation Street.

Reservoir Street.

### **Draining, Levelling, Flagging, Paving, Channelling and Completing.**

Edgeworth Street, from Robins Lane to Smith Street.

Allen Street.

Albion Street, from Peter Street to Kirkland Street.

Beech Street.

Gertrude Street.

**Sewering and Draining.**

Fleet Lane.

**FOOTPATHS.****Flagging, Paving and Channelling.**

Windle Street, from Atherton Street to Morley Street.  
Boundary Road, from Pigot Street to Creswell Street.

**PASSAGES.****Sewering, Draining, Levelling, Paving, Channelling, and Completing.**

Passage between Wilson Street and Napier Street, from Creswell Street to No. 135, Napier Street.

**Draining, Levelling, Paving, Channelling and Completing.**

Passage rear of Garnet Street, Harrison Street, Waterdale Crescent<sup>t</sup>, and Robins Lane.  
 ,,, Nos. 1—19, Morgan Street, and Nos. 233—251, Gaskell Street.  
 ,,, Boundary Road and Spray Street, from Lingholme Road to Harris Street.  
 ,,, Nos. 91—127, Shaw Street.  
 ,,, Nos. 77—121, Vincent Street and Hardshaw Street.  
 ,,, between Bickerstaffe Street, Shaw Street, George Street, and Hardshaw Street.  
 ,,, rear of Nos. 126—154, Birchley Street, and Nos. 107—125, Brynn Street, from Standish Street to Clifton Street.  
 ,,, between Hardshaw Street and Vincent Street, from Clifton Street to Hospital Street.

**Sewering.**

Passage behind Enfield Street.

**PUBLIC HIGHWAYS.****Granite Paving.**

Waterloo Street, from Water Street to Arthur Street.

**STREETS AND PASSAGES DECLARED PUBLIC HIGHWAYS.**

Cleveland Street, from Marshalls Cross Road to Beaufort Street.  
 Manville Street, from Marshalls Cross Road to Beaufort Street.  
 Cowper Street, from Cleveland Street to Manville Street.  
 Fisher Street, from Taylor Street to Ellen Street.  
 Nicholson Street, from Charnwood Street to Broad Oak Road.  
 Crown Street, from Parliament Street to Elephant Lane.  
 Drake Street, from Hanover Street to Horace Street.  
 Dillaway Street, from Horace Street to Lingholme Road.  
 Cansfield Street, from Birchley Street to Shaw Street.  
 Central Street, from Standish Street to Swift Street.  
 Dudley Street, from Recreation Street to Twyford Street.  
 Standish Street, from College Street to Central Street.  
 Gleave Street, from Standish Street to Swift Street.  
 Lascelles Street, from South John Street to Ashcroft Street.  
 Parr Mount Street, from Orrell Street to Sorogold Street.

Passage rear of Nos. 2—30, Elliott Street.

- „ „ Nos. 84 and 86, Windle Street, and No. 92, Chapel Street.
- „ „ Nos. 84—90, Hardshaw Street, and Nos. 69—75, Vineent Street.
- „ between Orrell Street, Parr Mount Street, Lascelles Street, and South John Street.
- „ „ Lascelles Street, Ashcroft Street, Sorogold Street, and Parr Mount Street.
- „ rear of Nos. 1—19, Booth Street.
- „ between King's Road and Queen's Road.
- „ „ Grosvenor Road and King's Road.
- „ „ Critchley Street, Spurgeon Street, Roper Street, and Park Road.
- „ rear of Nos. 98—116, Nutgrove Road, and Nos. 4—36, Gertrude Street.
- „ „ Nos. 126—142, Nutgrove Road, and Nos. 1—25, Gertrude Street.
- „ „ Nos. 7—19, Rigby Street, Nos. 24—42, Water Street, and along gable of No. 7, Rigby Street.
- „ „ between Nos. 21 and 23, Keswick Road.
- „ rear of Nos. 4—20, Volunteer Street, and along gable of No. 20, Volunteer Street.
- „ „ Nos. 2—54, Gleave Street.
- „ „ Nos. 162—212, Central Street, and Nos. 1—53, Gleave Street.

*The foregoing information with regard to plans, streets, and passages, has been supplied by the kindness of the Borough Engineer.*

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**TABLE I.**

TABLE SHOWING CERTAIN MORTALITY STATISTICS IN THE COUNTY  
BOROUGH OF ST. HELENS FOR THE YEARS 1898—1908.

Year.	Population estimated to Middle of each year.	BIRTHS.		DEATHS UNDER ONE YEAR OF AGE.		DEATHS AT ALL AGES.		Deaths in Public Institutions.	Deaths of Non-Residents registered in District.	DEATHS AT ALL AGES. NETT.	
		Number.	Rate.*	Number.	Rate per 1000 Births registered.	Number.	Rate.*			Number.	Rate.*
1898 ..	84730	3262	38·4	566	172	1641	19·3	198	119	99	1615 19·0
1899 ..	86588	3115	35·9	492	157	1700	19·6	217	125	93	1682 19·4
1900 ..	88480	3100	35·0	584	188	1914	21·6	233	119	107	1906 21·5
1901 ..	84734	3128	36·9	550	175	1675	19·7	209	96	111	1711 20·1
1902 ..	86040	3222	37·4	541	167	1702	19·7	243	109	132	1711 19·8
1903 ..	87385	3421	39·1	475	138	1535	17·5	209	96	118	1568 17·9
1904 ..	88722	3321	37·4	578	174	1788	20·1	160	66	129	1859 20·9
1905 ..	89843	3239	36·0	430	132	1470	16·3	204	73	137	1545 17·2
1906 ..	91153	3091	33·9	493	159	1512	16·5	229	87	148	1577 17·3
1907 ..	92476	3155	34·1	491	155	1680	18·1	278	104	125	1701 18·3
Averages for years 1898-1907 }	88015	3205	36·4	520	161	1661	18·8	218	99	125	1685 19·1
1908	93812	3311	35·29	404	122	1436	15·3	281	88	159	1507 16·06

Area of District in acres (exclusive of area covered by Water) .. 7284·427 Acres.

Total population at all ages .. .. .. .. .. 84,410

Number of inhabited houses .. .. .. .. .. 15,122

Average number of persons per house .. .. .. .. .. 5·58

At Census  
of 1901.

**TABLE II.**

TABLE SHOWING CERTAIN MORTALITY STATISTICS, CLASSIFIED ACCORDING TO WARDS, IN THE COUNTY BOROUGH OF ST. HELENS FOR THE YEARS 1898 TO 1908.

NAMES OF LOCALITIES.	YEAR.	NORTH ECCLESTON.		SOUTH ECCLESTON.		CENTRAL.		NORTH WINDLE.		SOUTH WINDLE.	
		Deaths under 1 year.	Deaths at all Ages.	Deaths under 1 year.	Deaths at all Ages.	Deaths under 1 year.	Deaths at all Ages.	Deaths under 1 year.	Deaths at all Ages.	Deaths under 1 year.	Deaths at all Ages.
1898	...	10003	218	8549	107	8690	138	9558	166	9084	140
1899	..	10222	184	8736	128	8880	157	9768	147	9283	153
1900	..	10453	227	8926	136	9073	179	9980	181	9484	170
1901	..	10007	221	7958	150	9616	139	8755	161	9872	182
1902	..	10840	209	9256	139	46	7130	144	57	11810	168
1903	..	11009	183	9400	143	50	7240	127	43	12002	145
1904	..	11178	265	9544	170	53	7350	117	39	12186	170
1905	..	11321	172	9662	161	52	7443	126	37	12338	142
1906	..	11481	172	9802	159	55	7553	121	46	12518	146
1907	..	11683	212	10000	183	57	7594	109	28	12722	165
Averages of Years 1898 to 1907.		10819		206		79		49		8056	
1908	...	11868		46		168		173		50	
		11868		10210		112		21		7624	
		11868		149		149		38		9013	
		11868		11163		159		48		8944	
		11868		12937		21		12937		131	
		11868		149		149		38		131	
		11868		12937		12937		41		41	

TABLE II.—CONTINUED.

TABLE SHOWING CERTAIN MORTALITY STATISTICS—CONTINUED.

Names of Localities.	Year.	Sutton East.		Sutton West.		Par.		Whole Borough.	
		Deaths under 1 year.	Deaths at all Ages.	Population estimated to middle of each Year.	Deaths under 1 year.	Deaths at all Ages.	Population estimated to middle of each Year.	Deaths under 1 year.	Deaths at all Ages.
HARDSHAW.	1898	10502	230	9272	147	296	63	9683	199
	1899	10732	218	9475	173	309	66	9896	231
	1900	10966	231	9683	176	338	64	10112	256
	1901	10796	191	9893	153	41	54	9396	194
	1902	9750	198	9652	171	54	51	10280	213
	1903	...	9901	210	65	8838	178	9979	235
	1904	...	10052	255	87	8975	195	10132	224
	1905	...	10179	181	52	9112	178	10260	143
	1906	...	10329	179	64	9357	142	10410	145
	1907	...	10510	223	63	9479	168	10521	151

**TABLE III.**

TABLE SHOWING NEW CASES OF INFECTIOUS SICKNESS, COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH DURING THE YEAR 1908, IN THE ST. HELENS URBAN SANITARY DISTRICT, CLASSIFIED ACCORDING TO DISEASES, AGES, AND LOCALITIES.

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.							TOTAL CASES NOTIFIED IN EACH LOCALITY.							No. OF CASES REMOVED TO HOSPITAL FROM EACH LOCALITY.										
	At All Ages.	Under 1.	1 to 5.	5 to 10.	10 to 25.	25 to 65.	65 and upwards.	North Ecclesfield.	South Ecclesfield.	Central Ecclesfield.	North Wimble.	South Wimble.	Hardshaw.	West Sutton.	East Sutton.	Par.	North Ecclesfield.	South Ecclesfield.	Central Ecclesfield.	North Wimble.	South Wimble.	Hardshaw.	West Sutton.	East Sutton.	Par.
Small-pox ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Membranous Croup } 211	2	59	101	16	33	..	22	34	10	21	5	34	42	11	32	14	21	5	15	3	24	31	6	22	
Erysipelas ..	..	86	1	3	8	13	51	10	14	12	3	12	5	14	6	8	12	1	1	..	..	2	..	..	..
Scarlet Fever ..	..	802	11	254	463	48	26	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Typhus Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever ..	..	90	1	7	32	25	25	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Relapsing Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Continued Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever ..	..	12	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Plague ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals ..	..	1201	15	323	604	105	144	10	237	182	65	148	95	143	125	88	118	193	48	105	72	97	83	52	73

TABLE IV.

CAUSES OF, AND AGES AT, DEATH DURING YEAR 1908.

CAUSES OF DEATH.	DEATHS IN WHOLE DISTRICT AT SUBJOINED AGES.										DEATHS IN LOCALITIES (AT ALL AGES).												
	All Ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	North Ecclesiastion.	South Ecclesiastion.	Central.	North Middle.	South Middle.	West Sutton.	Par.	Deaths in Public Institutions.								
Small-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Measles	..	..	..	..	..	..	..	29	1	4	1	2	1	1	1	27	1	10	..				
Scarlet Fever	..	..	..	..	..	..	..	7	4	1	1	1	1	1	1	..	..	..	..				
Whooping Cough	..	..	..	..	..	..	..	2	2	2	1	1	2	2	2	..	..	..	..				
Diphtheria and membranous croup	..	..	..	..	..	..	..	17	12	12	1	1	2	2	2	..	..	..	..				
Croup	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
{ Enteric	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Other Continued	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Epidemic Influenza	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Plague	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Diarrhoea	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Enteritis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Erysipelas	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Puerperal Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Phthisis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Other Tubercular Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Cancer, Malignant Disease	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Bronchitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Pneumonia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Pleurisy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Other Diseases of Respiratory Organs	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Alcoholism, Cirrhosis of Liver	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Venereal Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Premature Birth	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Diseases and Accidents of Parturition	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Heart Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Accidents	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
Suicides	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
All other causes	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..				
All causes	..	..	..	..	..	..	..	1507	404	218	73	65	492	255	168	112	149	131	174	151	120	170	281

**TABLE V.**  
INFANTILE MORTALITY DURING THE YEAR, 1908.

Deaths from stated Causes in Weeks and Months under One Year of Age.

CAUSE OF DEATH.		1 WEEK. UNDERT.	1-2 WEEKS. UNDERT.	2-3 WEEKS. UNDERT.	3-4 WEEKS. UNDERT.	4-5 WEEKS. UNDERT.	5-6 WEEKS. UNDERT.	6-7 WEEKS. UNDERT.	7-8 WEEKS. UNDERT.	8-9 WEEKS. UNDERT.	9-10 MONTHS. UNDERT.	10-11 MONTHS. UNDERT.	11-12 MONTHS. UNDERT.	TOTAL DEATHS UNDER ONE YEAR	
All Causes	Certified ..	84	26	15	18	143	23	22	23	19	21	29	21	17	381
	Uncertified ..	16	..	..	2	18	2	1	..	1	..	..	..	1	23
i. Common Infectious Diseases.	Small-pox ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Chicken-pox ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Measles ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Scarlet Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Diphtheria ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Whooping Cough ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
ii. Diarrhoeal Diseases.	Diarrhoea, all forms	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Enteritis, Muco-enteritis, Gastro-enteritis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Gastritis, Gastro-intestinal Catarrh }	..	..	..	..	..	..	..	..	..	..	..	..	..	..
iii. Wasting Diseases.	Premature Birth ..	80	15	7	109	6	2	..	..	..	..	..	..	..	119
	Congenital Defects ..	5	4	2	3	15	1	1	..	..	..	..	..	..	17
	Injury at Birth ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Want of Breast Milk ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Atrophy, Debility, Marasmus }	..	..	..	..	..	..	..	..	..	..	..	..	..	..
iv. Tuberculous Diseases.	Tuberculous Meningitis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Tuberculous Peritonitis : Tables Mesenterica }	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Other Tuberculous Diseases }	..	..	..	..	..	..	..	..	..	..	..	..	..	..
v. Other Causes.	Erysipelas ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Syphilis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Rickets ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Meningitis (not Tuberculosis) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Convulsions ..	6	1	3	11	3	2	2	6	3	2	1	1	2	34
	Bronchitis ..	..	1	3	1	2	1	..	1	1	1	2	1	2	31
	Laryngitis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Pneumonia ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Suffocation, overlying ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Other Causes ..	..	2	2	..	..	..	..	..	..	..	..	..	..	..
	100	26	15	20	161	25	22	22	23	20	21	29	21	18	404

## INFANTILE MORTALITY DURING THE YEAR 1908.

Deaths from stated Causes in Weeks and Months under One Year of Age in the various Wards of the Borough.

		CAUSES OF DEATH.					WARDS.				
		North Ecclesstone	South Ecclesstone	Central	North Middle South	South Middle	East Sutton	West Sutton	Par	Whole Borough	Borough of
I.	Small-pox	..	..	..	..	..	..	..	..	..	..
	Chicken-pox	..	..	..	..	..	..	..	..	..	..
	Measles	..	..	..	..	..	..	..	..	..	..
	Scarlet Fever	..	..	..	..	..	..	..	..	..	..
	Diphtheria	..	..	..	..	..	..	..	..	..	..
II.	Whooping Cough	..	..	..	..	..	..	..	..	..	..
	Diarrhoeal	..	..	..	..	..	..	..	..	..	..
	Enteritis. Muco-enteritis,	..	..	..	..	..	..	..	..	..	..
	Gastro-enteritis	..	..	..	..	..	..	..	..	..	..
	Diseases.	..	..	..	..	..	..	..	..	..	..
III.	Premature Birth	..	..	..	..	..	..	..	..	..	..
	Congenital Defects	..	..	..	..	..	..	..	..	..	..
	Injury at Birth	..	..	..	..	..	..	..	..	..	..
	Want of Breast Milk	..	..	..	..	..	..	..	..	..	..
	Gastritis. Gastro-intestinal Catarrh	..	..	..	..	..	..	..	..	..	..
IV.	Atrophy, Debility, Marasmus	..	..	..	..	..	..	..	..	..	..
	Tuberculous Meningitis	..	..	..	..	..	..	..	..	..	..
	Tuberculous Peritonitis:	..	..	..	..	..	..	..	..	..	..
	Tabes Mesenterica	..	..	..	..	..	..	..	..	..	..
	Other Tuberculous Diseases	..	..	..	..	..	..	..	..	..	..
V.	Erysipelas	..	..	..	..	..	..	..	..	..	..
	Syphilis	..	..	..	..	..	..	..	..	..	..
	Rickets	..	..	..	..	..	..	..	..	..	..
	Meningitis (not Tuberous)	..	..	..	..	..	..	..	..	..	..
	Convulsions	..	..	..	..	..	..	..	..	..	..
		Tuberculous Diseases.					Other Causes.				
		Other Diseases.					Causes.				
		Suffocation, overlying					Other Causes.				
		Other Causes.					Other Causes.				
		Total					Total				

**Table VI.**  
**AGE CONSTITUTION OF THE POPULATION.**

AGES.	CENSUS, 1891, Old Borough Area.	CENSUS, 1901, Extended Borough.	Estimated Population at each Age in the Extended Borough, 1908.
Under 1 year ... ... ...	2398	2611	2896
1 to 2 years ... ... ...	2143	2397	2667
2 „ 3 „ ... ... ...	2140	2380	2644
3 „ 4 „ ... ... ...	2068	2358	2623
4 „ 5 „ ... ... ...	1967	2324	2584
Total under 5 years ... ...	10716	12070	13414
5 to 10 years ... ...	9221	10884	12071
10 „ 15 „ ... ...	8334	9727	10771
15 „ 20 „ ... ...	7441	8546	9600
20 „ 25 „ ... ...	6582	7961	8553
25 „ 30 „ ... ...	6023	7274	8123
30 „ 35 „ ... ...	5129	6047	6746
35 „ 40 „ ... ...	4465	5257	5855
40 „ 45 „ ... ...	3674	4451	4950
45 „ 50 „ ... ...	2685	3688	4124
50 „ 55 „ ... ...	2434	2860	3206
55 „ 60 „ ... ...	1620	1999	2286
60 „ 65 „ ... ...	1407	1679	1896
65 „ 70 „ ... ...	763	998	1112
70 „ 75 „ ... ...	461	590	675
75 „ 80 „ ... ...	227	249	293
80 „ 85 „ ... ...	83	99	105
85 „ 90 „ ... ...	19	23	24
90 „ 95 „ ... ...	4	5	5
95 „ 100 „ ... ...	—	3	3
	72188	84410	93812

## Table VII.

## MORTALITY STATISTICS FOR EACH WARD AT VARIOUS AGES.

General Diseases

DISEASES.	AGES AT DEATH.												WARDS.														
	0 to 3 ms	3 to 6 ms	6 to 9 ms	9 to 12 ms	12 to 15 ms	15 to 18 ms	18 to 21 yrs	21 to 25 yrs	25 to 35 yrs	35 to 45 yrs	45 to 55 yrs	55 to 65 yrs	65 to 75 yrs	75 to 85 yrs	85 years old	Upwards of 85 years	Whole Borough	Institute outside Par	Deaths in Sutton West	Sutton East	Hardshaw South	Wardle North	Wardle Middle	Hardshaw South	Sutton East	Par	Deaths in Sutton West
Premature Birth & Congenital Debility	113	4	2	3	..	..	..	..	..	..	..	..	..	..	..	..	11	13	8	16	15	14	12	17	1	122	17
Congenital Malformation	15	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	96
Old Age	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<b>Local Diseases</b>																											
(a) NERVOUS SYSTEM																											
Inflammation of Brain or Membranes	2	3	8	13	3	..	2	1	2	..	..	1	..	2	..	..	1	9	2	..	..	..	..	..	..	..	39
Apoplexy, Softening of Brain	1	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	7	7	6	5	5	4	..	..	..	69
Insanity	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	18
Epilepsy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	43
Convulsions	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Laryngismus Stridulus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diseases of Spinal Cord, P. A. and																											
Paraplegia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Diseases of Nervous System	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(b) DISEASES OF SPECIAL SENSE																											
Eye, Ear, and Nose	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
(c) DISEASES OF RESPIRATORY SYSTEM																											
Laryngitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4
Croup	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Emphysema and Asthma	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6
Bronchitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	152
Pneumonia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	103
Pleurisy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Other Respiratory Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	30

I 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

B



DISEASES.	AGES AT DEATH.										WARDS.	DEATHS IN OUTSIDE INSTITUTIONS	DEATHS IN WHOLE Boroughs					
	0 to 3	3 to 6	6 to 12	1 to 2	2 to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	
(i) DISEASES OF REPRODUCTIVE SYSTEM																		
Of Male Organs ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Of Female Organs ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Abortion and Miscarriage ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Convulsions ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Placenta Praevia ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Accidents of Childbirth ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(k) DISEASES OF BONES AND JOINTS																		
Caries and Necrosis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Arthritis, Osteitis, Periostitis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Diseases of Bones and Joints ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(l) DISEASES OF INTEGUMENTS																		
Carbuncle, Phlegmon ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Diseases of Integumentary System ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<b>Deaths from Violence</b>																		
(a) ACCIDENT OR NEGLIGENCE																		
Fractures and Contusions ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gunshot Wounds ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cuts or Stabs ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Burns or Scalds ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Poison ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Drowning ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Suffocation ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Otherwise ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	19	20	21	22	23	24	25	26	27	28	29							

E

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	
(b) HOMICIDE	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Manslaughter	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Murder	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<hr/>																														
(c) SUICIDE	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gunshot Wounds	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cut, Stab	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Poison	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Drowning	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hanging	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Otherwise	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<hr/>																														
<b>Deaths from Ill-Defined and not Specified Causes.</b>																														
Dropsey	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Debility-Atrophy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Marasmus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mortification	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tumour	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Abscess	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Haemorrhage	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sudden Death (cause not known)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other causes not specified	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<hr/>																														
<b>SUMMARY.</b>																														
ZYMIOTIC DISEASES	..	14	13	20	30	14	15	6	10	1	..	3	6	10	5	5	5	2	..	19	13	12	20	25	10	4	159	..		
PARASITIC DO.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
DIETETIC DO.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
CONSTITUTIONAL DO.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
DEVELOPMENTAL DO.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
LOCAL DO.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
DEATHS FROM VIOLENCE	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
ILL-DEFINED OR NOT SPECIFIED	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
<hr/>																														
TOTALS ..	..	225	66	113	131	42	30	15	44	29	27	38	75	110	133	174	159	92	4	168	173	112	149	131	174	159	92	159		

**Table VIII.**

UNCERTIFIED DEATHS—1908.

DISEASE.	MONTHS.			YEARS.						Total
	0-3	3-6	6-12	1-5	5-10	10-25	25-45	45-60	Over 60	
Premature Birth ..	11	—	—	—	—	—	—	—	—	11
Bronchitis .. ..	2	—	—	2	—	—	1	1	3	9
Heart Disease ..	—	—	—	—	—	1	3	3	1	8
Convulsions .. ..	5	1	—	1	—	—	—	—	—	7
Senile Decay ..	—	—	—	—	—	—	—	—	4	4
Debility .. ..	3	—	—	—	—	—	—	—	—	3
Apoplexy .. ..	—	—	—	—	—	—	—	—	2	2
Anæmia .. ..	—	—	—	—	—	1	—	—	—	1
Parturition .. ..	—	—	—	—	—	—	1	—	—	1
Tuberculous Peritonitis ..	—	—	—	1	—	—	—	—	—	1
Tonsilitis .. ..	—	—	—	1	—	—	—	—	—	1
Asthma .. ..	—	—	—	—	—	—	—	—	1	1
Rickets .. ..	—	—	—	1	—	—	—	—	—	1
TOTALS .. ..	21	1	1	5	—	2	5	4	11	50



IV.

*School Hygiene.*

TO THE CHAIRMAN AND MEMBERS OF THE  
EDUCATION COMMITTEE.

GENTLEMEN,

I have the honour to submit to you the first Annual Report required by the Regulations of the Board of Education with respect to the medical inspection of school children. (Circular 576, paragraph 13).

The work expected of Local Education Authorities under these Regulations is of a most extensive character, but it will be a matter of satisfaction to this Committee that so large a proportion of it has been carried out during the year.

I have pleasure in acknowledging the help and co-operation of the Secretary for Education, and the assistance rendered to me by the School Attendance Officers and Head Teachers.

I have also to record my thanks for the kindness and consideration I have received at all times from the Chairman and Members of the Committee.

I am, Gentlemen,

Your obedient servant,

JOHN J BUCHAN.

SCHOOL MEDICAL OFFICER.

TOWN HALL, ST. HELENS,  
*May, 1909.*

*Explanatory Extract from Circular 596 of the Board of Education, 17th August, 1908.*

6. As regards the scope of the report, however, the Board consider that it is desirable that it should deal with the whole subject of School Hygiene, and should cover as much as possible of the ground indicated under the following heads.....

(a) General review of the hygienic conditions prevalent in the Schools in the area of the Local Education Authority in respect of such matters as surroundings, ventilation, lighting, warming, equipment, and sanitation, including observations on the type and condition of sanitary conveniences and lavatories, water supply for washing and drinking purposes, the cleanliness of schoolrooms and cloakrooms, arrangements for drying children's cloaks and boots, and the relation of the general arrangements of the School to the health of the children.

(b) General description of the arrangements which have been made for the co-relation of the School Medical Service with the Public Health Service and for the organisation and supervision of medical inspection, and an account of the methods of inspection adopted, including—

- (i) A statement of the extent (if any) to which the Board's Schedule of Medical Inspection has not been followed and the reasons for such departure;
- (ii) A statement showing the assistance given to the School Medical Officer and his assistants by nurses, managers of schools, teachers, attendance officers or other persons;
- (iii) A statement showing the methods adopted for securing the presence of parents at the inspection and their co-operation in the subsequent treatment of defects, together with a review of the effect of such methods;
- (iv) The extent to which disturbance of school arrangements was involved by the inspection. (Art. 43 (b) and 44 (h) of Code of 1908).

(c) General statement of the extent and scope of the medical inspection carried out during the year, including—

- (i) The number of visits paid to Schools and Departments.
- (ii) The principle on which children have been selected for inspection; (at entrance, before leaving, by selection according to ages or otherwise);
- (iii) The number of children inspected (classified for age at date of inspection and for sex);
- (iv) The number of children referred for subsequent or further examination;
- (v) The number of children in respect of whom directions were given for treatment of defects, including a classified statement of such defects;
- (vi) The average time per head occupied by inspection.

(d) General review of the facts disclosed by medical inspection, under the headings contained in the Schedule to Circular 562, including tables showing the height and weight of children inspected (according to age at date of inspection and sex).

(e) General review of the relation of home circumstances and social and industrial conditions to the health and physical condition of the children inspected, so far as facts bearing on this point have come under notice.

(f) Review of the methods employed or available for the treatment of defects, such as defective eyesight, carious teeth, nasal obstruction or adenoids, tonsillitis, discharging ears, pediculosis, ringworm, and other skin diseases, including an account of the action of school nurses in obtaining in the treatment of such defects.

(g) Review of action taken to detect and prevent the spread of infectious diseases, including reference to action taken under Articles 45 (b), 53 (b) and 57 of the Code of 1908.

(h) Review of the methods adopted and the adequacy of such methods for dealing with blind, deaf, mentally or physically defective and epileptic children under the Acts of 1893 and 1899.

(i) Review of—

- (i) The methods and results of instruction in personal hygiene and temperance in the Public Elementary Schools in the area;
- (ii) The methods and results of physical or breathing exercises in the Schools;
- (iii) Arrangements for open air schools, school camps, &c., under Article 44 (g) of the Code of 1908.

(i) Account of miscellaneous work, such as the examination of Scholarship candidates, Pupil Teachers, or teachers of any grade.

# **SCHOOL HYGIENE.**

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## **GENERAL DESCRIPTION.**

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**Introductory.**—In St. Helens in 1898 all kinds of infectious disease notifiable and non-notifiable occurring among school children were brought, under the survey of the Health Department. Section 96 of the St. Helens Corporation Act, 1898, states “ Whenever any scholar who attends any school within the Borough shall be suffering from any infectious disease, the principal or person in charge of such school or (if such school is divided into separate departments and there is no principal or person in charge of the whole school) the person in charge of the department which such scholar attends shall forthwith send notice thereof to the Medical Officer of Health and shall furnish to the Corporation at their request a list of the pupils attending thereat, together with their addresses, and in default thereof shall be liable to a penalty not exceeding forty shillings.” The association with schools and school teachers thus brought about, led to further developments in health work, mainly through the school teachers seeking advice about other kinds of cases, sometimes because of the suspicion of infection, but more often on account of some educational difficulty, arising perhaps from neglect in the care or treatment of the children. For a time this work was carried out without help, but early in 1906 the Health Committee decided to appoint a nurse, chiefly for the purpose of visiting cases of non-notifiable infectious diseases, contagious skin diseases, and verminous, dirty and neglected school children. The importance of the nurse’s work was at once recognised, especially with respect to school attendance, and the school attendance officers actively co-operated with her. Occasional medical inspections began to be made at the schools, but after the appointment of an assistant medical officer in October 1906, they became more frequent, and the whole work gradually became more systematised.

The work done before the passing of the Education (Administrative Provisions) Act, 1907, paved the way for the development of school hygiene necessary under that Act, and placed the Local Education Authority in a better position to devise and adapt administrative machinery appropriate for it. The Medical Officer of Health was requested to advise the

Education Authority as and when necessary, and was instructed, in January 1908, to begin the work of medical inspection under the Act. In order to better carry out these additional duties, it was resolved to appoint a second school nurse. The arrangements for the co-relation of the school medical work with the general health work were made without difficulty, the organisation and supervision coming under the Medical Officer of Health as School Medical Officer. The other members of the staff engaged are the Assistant Medical Officer and the two school nurses.

**Systematic Medical Inspection.**—In making arrangements for this work, the Medical Officer co-operates with the Secretary of Education, who is kept informed of its progress, so that the general work of education is disturbed as little as possible. The progress made here has been largely due to the help thus secured. When the date and time of inspection are settled, notices are sent out to the school teachers concerned, along with printed notices to be forwarded to the parents or guardians of the children to be examined. The medical officer then visits the school and makes final arrangements for the inspection. The Local Education Authority decided to adopt, as a basis of medical inspection, the schedule issued by the Board of Education. The working instructions given to the staff engaged are to carry out the inspection along the lines suggested in the circulars 576 and 582. The inspection is carried out by a medical officer, who is assisted in the work by a school nurse and a school teacher. The school teacher takes part in the clerical work, observes the conditions noted, and becomes familiar with the terms adopted. The school nurse records the height and weight of the child, the condition of the clothing and footwear as to sufficiency, cleanliness and tidiness, and the condition of the skin and head as to cleanliness and freedom from vermin. She also tests the visual acuity with Snellen's test types. The Medical Officer interviews the parents and carries out the medical part of the examination. The results of medical inspection are recorded in card form, and these cards are kept in the Medical Officer's Department for ready reference when subsequently any of the children come under notice. The school teacher copies from this card the results of the medical inspection on Forms which have been received from the Secretary for Education. These forms are carefully preserved by the teacher in whose class the child is, and are expected to follow the child about in its classes or schools ; they are confidential documents and kept in this fashion, take the place of the register of the facts revealed by inspection to be kept at the school. (Circular 576, Par. 13 (c)).

**Treatment.**—By far the most difficult and most important part of the work is to secure treatment for the cases found on inspection to present some abnormality, and to follow them up until the treatment is carried out. The exercise of patient and tactful persuasion is especially necessary, for the parents themselves in many cases not recognising the defect, do not appreciate the necessity of the advice given, and are unwilling therefore to seek a remedy. When a condition requiring attention be noted, it is dealt with as follows :—

I. If medical treatment be required the parents are advised to seek treatment from their private medical attendant, and the following printed form is usually filled up and handed to them :—

*COUNTY BOROUGH OF ST. HELENS.*

*Education Committee.*

*Medical Officer's Department,*

*Town Hall, St. Helens.*

.....19

*Dear Sir,*

*I have examined the undermentioned child, and have advised the parents to seek your further advice.*

*Yours faithfully,*

*MEDICAL OFFICER.*

*Name of Child .....* *Abnormal condition noted*

*Address .....* *on inspection.*

*School attended by the child .....*

*Department .....*

This form is taken by the parent to the private medical attendant and the case is then left in his hands.

II. If verminous or uncleanly conditions of the head, body or clothing be noted at the inspection, the matter is privately brought before the parent or guardian present. If attention be not paid to the instructions or if no parent or guardian be present at the inspection, then notices are served in accordance with a procedure which results, in the case of wilful carelessness, in a prosecution of the parents or guardians for failure to send their child in a fit state to attend school.

This procedure need not be further explained as it will cease on the 1st April, 1909, being replaced by that provided for in Section 122 of the Children Act, 1908, which states :—

Section 122—(1) A local education authority may direct their Medical Officer, or any person provided with and, if required, exhibiting the authority in writing of their Medical Officer, to examine in any public elementary school provided or maintained by the authority the person and clothing of any child attending the school, and, if on examination the Medical Officer or any such authorised person as aforesaid, is of opinion that the person or clothing of any such child is infected with vermin or is in a foul or filthy condition, the local education authority may give notice in writing to the parent or guardian of, or other person liable to maintain the child, requiring him to cleanse properly the person and clothing of the child within twenty four hours after the receipt of the notice.

(2) If the person to whom any such notice as aforesaid is given fails to comply therewith within such twenty-four hours, the Medical Officer, or some person provided with and, if required, exhibiting the authority in writing of the Medical Officer, may remove the child referred to in the notice from any such school, and may cause the person and clothing of the child to be properly cleansed in suitable premises and with suitable appliances, and may, if necessary for that purpose, without any warrant other than this section, convey to such premises and there detain the child until the cleansing is effected.

(4) Where, after the person or clothing of a child has been cleansed by a local education authority under this section, the parent or guardian of, or other person liable to maintain the child, allows him to get into such a condition that it is again necessary to proceed under this section, the parent, guardian, or other person shall, on summary conviction, be liable to a fine not exceeding ten shillings.

(5) Where a local education authority give notice under this section to the parent or guardian of, or other person liable to maintain, a child, requiring him to cleanse the person and clothing of the child, the authority shall also furnish him with written instructions describing the manner in which the cleansing may best be effected.

III. Many of the conditions noted are outside the province of the general medical practitioner, and require special medical treatment. This is particularly the case in diseases of the eye, throat, nose and ear, and occasionally of the skin. There are in St. Helens some medical practitioners who do a little of this kind of work, which however is not sufficiently remunerative, in this town, to justify a medical man devoting his whole time to it, or treating any other than better middle class patients. Treatment among children of the working class in St. Helens for special conditions is secured in the majority of cases from hospitals, but the facilities for treatment there are not great. The eye, ear and throat dispensary at the St. Helens Hospital, on account of its special regulations, is not available for a large number of the children actually suffering, and is not sufficiently large to treat all the children who might go there. The scheme of the Guardians for examination, and treatment at the Whiston Workhouse is not popular, and any instruction to parents to take their children there for treatment is likely to be met with resentment. Hospitals in Liverpool and the dispensaries connected therewith go only a little way to meet the local deficiency, on account of the trouble and expense involved in taking the children to that city. The result is that many children who have been detected suffering from these particular medical conditions are left untreated, despite all the efforts of the Education Authority to secure treatment for them. This was referred to in the report of last year (page 98), but with the increase in the work required to be undertaken in 1908 it has become more evident.

Cases of ringworm in which an adequate treatment prescribed by the medical practitioner has been neglected, have very frequently come under observation, and they give rise to much difficulty. The Local Education Authority is definitely expected to supervise or carry out some method of amelioration (Circular 576, paragraph 15), but such a procedure by the Education Authority has been objected to locally as interfering with private medical practice. Yet to leave these cases in the hands of the private practitioner means usually either an unnecessarily prolonged exclusion from school, arising from the carelessness of the parent in treatment, or a premature return to school, with the consequent spreading of the disease

there. In such circumstances, those cases of ringworm coming under the notice of the Education Authority require most careful consideration, and in St. Helens it frequently becomes necessary for the School Nurse to take them under her personal survey, as she is in a good position to prevent neglect in treatment.

IV. Home visitation is required in a great number of cases, and this is regarded as a most invaluable means of impressing the parents with the necessity of securing medical treatment and of gaining further information with respect to the home life and surroundings of the children. The School Nurse carries out this home visitation and keeps the children under observation, so as to make certain that treatment is being followed. This visitation arises not only as a result of routine medical inspection of the schools, but also as a result of special reports from school teachers, education officials, and others with respect to some peculiarity or abnormal condition in a school child. Some cases, however, need so constant a supervision that the child is told to present itself every Saturday morning to make certain that the remedial measures are being continuously carried out. This happens most frequently in verminous conditions of the head, contagious skin disease, and the like, where treatment is difficult and tedious and apt to be neglected.

## **MEDICAL INSPECTION IN 1908.**

**Visits to Schools.**—The number of visits paid to schools was 378, of which 146 were made on account of the routine medical inspection, while 232 were made for other special purposes. The extent to which disturbance of the school arrangements was involved varied; in 50 cases a class room was used for the purpose of the inspection, and as a result in 14 of these considerable overcrowding and interference with the school work was caused in other class rooms. In 13 schools a cloak room was used, in 9, a teachers' room, and in 9, another room in connection with the school. None of the places in which the work was carried out was specially adapted for the inspection, and at several much inconvenience arose. The heating of the rooms of inspection generally was good, but the lighting was frequently very poor, and the ventilation was in many cases, bad. Details of the places where the inspection was carried out in each school are given in table A, page 16, at the end of this report.

**Children Examined.**—The Local Education Authority decided to carry out during 1908 medical inspection of the children newly admitted and the children about to leave school, as required by the Regulations of

the Board of Education (Circular 576, paragraph 12). The number of children inspected, classified according to age at the date of inspection, and for sex, is shown in the following table; the details for each school are shown on table B, page 18, at the end of this report.

## CHILDREN EXAMINED CLASSIFIED ACCORDING TO AGE AND SEX.

The average time occupied by inspection, carried out as already described, is about five minutes for each child ; 12 children can be inspected in an hour, and 50 is a convenient number to arrange to be inspected in one school day. With infants the time taken is a little less, but with older children it is a little more.

So far as possible the medical inspection of each child was completed at the time, but certain children were singled out for further examination, which was carried out either on a subsequent visit to the schools or at the Medical Officer's office ; the number selected for a second examination did not exceed 0·5 per cent. of the cases examined.

**Height and Weight.**—The average height and weight of the children inspected is shown in the following table, compared with the standard of the Anthropometric Committee. The number of children dealt with is too small to form the basis of any general conclusions, but it will be noticed that in each case the St.Helens average is below the Anthropometric Committee's standard.

## AVERAGE HEIGHT AND WEIGHT AT VARIOUS AGES.

Age and Sex.	St. Helens				Average Standard of Anthropometric Committee.			
	Height.		Weight.		Height.		Weight.	
	English inches.	Metric metres.	English lbs.	Metric kilos.	Eng. inches	Metric metres.	Eng. lbs.	Metric kilos.
4—5 years — Boys	38·43	·976	35·97	16·35	39·8	1·010	36·6	16·63
— Girls	37·81	·960	34·82	15·82	39·2	·995	36·1	16·40
5—6 years — Boys	39·68	1·007	37·62	17·10	41·0	1·041	39·9	18·13
— Girls	39·31	·998	36·65	16·65	40·8	1·036	39·6	18·00
12—13 yrs. — Boys	53·96	1·370	71·28	32·40	55·0	1·397	76·7	34·86
— Girls	54·40	1·381	72·83	33·10	55·7	1·414	76·4	34·72
13—14 yrs. — Boys	55·60	1·412	75·75	34·43	56·9	1·445	82·6	37·54
— Girls	55·78	1·416	78·35	35·61	57·8	1·468	87·0	39·54

The details for each school are shown on table C, page 19, at the end of this report.

**Defects Noted.**—The number of physical defects of one kind or other, apart from dirty or verminous conditions, noticed was 3,019 or 0·97 per child inspected. The number of children with dirty or verminous conditions of the head or body was 855 or 27·5 per cent. of the children examined. The number of children with insufficient clothing was 110 or 3·5 per cent. of the children inspected. The details of the defects found are given in the following table, and the particulars with respect to each school are set out on table D, page 21, at the end of this report.

#### SUMMARY OF RESULTS OF INSPECTION.

NATURE OF DEFECT ...	DEPARTMENT				TOTAL	
	Infant		Mixed		Cases	Per cent.
	Cases	Per cent.	Cases	Per cent.		
Insufficient Clothing	37	2·4	73	4·9	110	3·5
Dirty head ... ...	276	17·9	366	24·7	642	20·6
Dirty body ... ...	107	6·9	106	7·1	213	6·8
Teeth —less than 4 decayed	573	37·2	788	53·2	1361	43·8
—4 or more decayed	534	34·6	488	32·9	1022	32·9
Enlarged tonsils ...	493	32·0	546	36·8	1039	33·4
Adenoids ... ...	104	6·7	116	7·8	220	7·0
Enlarged neck glands ...	268	17·4	176	11·9	444	14·3
External eye disease ...	71	4·6	67	4·5	138	4·4
Defective vision ...	46	2·9	267	18·0	313	10·0
Ear disease ... ...	52	3·3	39	2·6	91	2·9
Defective hearing ...	20	1·3	27	1·8	47	1·5
Defective speech ...	44	2·8	15	1·0	59	1·9
Defective mental condition ...	6	·38	7	·47	13	·41
Heart diseases ... ...	3	·19	11	·74	14	·45
Lung diseases ... ...	197	12·7	17	1·1	214	6·8
Constitutional defects ...	34	2·2	15	1·0	49	1·5
Infectious & Contag's diseases	38	2·4	13	·87	51	1·6

**CONDITION OF THE HEAD AND BODY.**—About 82% of the infants had clean heads, while in about 18% the head was dirty and verminous. Among the older children, however, the figures were 79 clean and 21 verminous. The proportion of verminous heads recorded among the children is very high ; it will not however be a matter of surprise to any who are even slightly acquainted with the prevalence of this condition in St. Helens. The verminous heads occurred almost wholly in girls whose long hair harboured too frequently lice and nits in profusion. The high percentage of this condition amongst the children and the increased proportion amongst the older ones indicates the urgent necessity of teachers taking an

interest in the personal hygiene of the children, so that the schools do not become a factor in the spread of vermin. The condition of the body was clean in 93% of the infants and dirty in 7%, and these figures were practically the same amongst the older children.

**CONDITION OF THE TEETH.**—The distinction is made between children with a full set of sound teeth, those in whom less than four were decayed, and those in whom four or more were decayed. Among the infants the percentage in these three classes was 28·1, 37·2, and 34·6 respectively, while among the older children these percentages were 13·7, 53·2, and 32·9 respectively. The proportion of very good and very bad sets of teeth was higher among the infants ; 76·7 per cent. of all the children examined had some decayed teeth.

**DISEASES OF THE NOSE AND THROAT.**—The high percentage of enlarged tonsils is noteworthy, 32% among infants and 36·8% among older children. The great majority seemed to have resulted from defects in personal hygiene, but only a small proportion required surgical treatment, not more than 10% among the infants and 15% among the older children. The proportion of nasal adenoids was not great, 6·7% and 7·8% in infants and older children respectively, but on the other hand almost all these required surgical treatment. The submaxillary and cervical glands were enlarged in 17·4% of the infants and 11·9% of the older children.

**EYE DISEASES AND DEFECTS.**—The number of cases of external eye disease was about 4·5% in both young and older children. The number of cases of defective vision reached, among the older children, 18 per cent. ; among the younger children this was only 2·9%, but on account of the difficulty of examination in them this figure cannot be considered accurate. All the eye conditions noted required medical treatment, visual defects of a minor character having been excluded in these percentages.

**DISEASES OF THE EAR.**—Chronic suppurative middle ear disease was noted in 3·3% of the infants, and 2·6% of the older children, while defective hearing was noted in 1·3% in the infants and 1·8% among the older children.

**Treatment obtained.**—In all cases instructions were given to the parents, either at the time of inspection or at the home visitation afterwards, as to how a remedy for the particular defect should be secured. Written notices were given in the following cases :—For vision, 54 ; eye disease, 6 ; ear disease, 5 ; skin diseases, 11 ; tonsils and adenoids, 23 ; other

throat affections, 3 ; dirty head, 125 ; and dirty body, 31. In order to obtain information as to what had been done after the school inspection by parents to remedy defective vision, the school nurse visited the homes of children in Thatto Heath and Merton Bank Schools, at an interval of about two months from the date of inspection. Of the 76 cases visited it was found that 9 had obtained glasses, and 9 were under treatment ; 50 had not made a definite effort to obtain treatment, while in the remaining eight cases no information could be had. Of those who had already obtained spectacles, two had been supplied by prescription from private practitioners in St. Helens, one from the eye department of the St. Helens Hospital, four were bought in a shop, while in the remaining two no information was given.

In addition to the defective cases found on inspection, numerous other cases of neglected illness among school children were brought under the notice of the department. The total number of these was 3,207, 2912 being reported by the school attendance officers, 197 by school teachers, and 98 by other persons. These children were suffering from defects which are classified in the following table, which also shows the means by which they were treated. From this table it will be seen that almost half of these children were untreated after the visit of the school nurse while less than one-third of the cases were treated by private practitioners.

DISEASE OR DEFECT.	Total Cases.	MANNER DEALT WITH.			
		Private Practitioners.	Hospital	Local Authority.	Untreated.
<b>Zymotic Diseases :—</b>					
Notifiable .. ..	42	29	13	—	—
Non-Notifiable .. ..	531	139	—	—	392
<b>Skin Diseases :—</b>					
Contagious .. ..	700	197	5	233	265
Non-Contagious .. ..	108	33	—	3	72
Eye Diseases or Defects .. ..	263	92	7	19	145
Ear and Throat Diseases or Defects ..	139	62	—	2	75
Epileptic and Defective Children ..	24	15	—	—	9
Other General and Local Diseases ..	1030	374	5	48	603
All other causes, including poverty, neglect and underfeeding .. }	370	—	—	370	—
 Totals .. ..					
Totals .. ..	3207	941	30	675	1561

**Medical Inspection and School Attendance.**—Reference has already been made to the measures taken for the detection and prevention

of the spread of infectious disease in schools ; in 1908 it was not necessary to take any action under articles 45 (b) or 57 of the Code, which provide for the closure of schools under medical advice. Under 53 (b) a very large number of children were excluded from school on the ground (1) that their exclusion was desirable to prevent the spread of disease, (2) that their uncleanly or verminous condition was detrimental to other scholars, or (3) that owing to their state of health or their physical or mental defects, they were incapable of receiving proper benefit from the instruction in the school. These exclusions were made by weekly report of the Medical Officer to the Secretary of Education.

The number of children who were reported as unfit to attend a public elementary school, and in whom prolonged periods of exclusion were advised, was 76. The causes were as follows :—

Tuberculosis—Lungs	...	...	18	Diseases of the Eye	...	10
Glands	...	...	4	„ Ear	...	1
Spine	...	...	3	„ Throat & Nose		3
Skin	...	...	2	„ Skin	...	4
Peritoneum	...	2		Epilepsy	...	6
Other forms	...	4		Other Nervous Diseases	...	5
Heart Disease	...	...	7	Deformities	...	3
Asthma and Bronchitis	...	...	3	Rheumatoid Arthritis	...	1

These certificates were forwarded to the Secretary of Education, who arranged for the exclusion of the scholars.

**Special Schools.**—One boy and one girl were certified for a blind and deaf school respectively during the year, and in these cases the parents made arrangements with the Local Education Authority for the maintenance of their children in schools outside the Borough. There are no special schools in St. Helens. In the report of the Superintendent School Attendance Officer it is stated that there are maintained in special schools 11 children, classified as follows :—Blind schools, 2 boys and 3 girls ; Deaf and Dumb Schools, 2 boys and 4 girls. The number of children dealt with by the Local Education Authority in this way is only a small number of the children in the Borough who require such treatment. This is especially true with respect to the defective and epileptic children, of whom it will be observed 11 were reported during 1908.

Medical certificates were given for the children committed to Industrial Schools outside the Borough, in which there were 15 at the close of the year.

**Miscellaneous.**—Physical and breathing exercises are now in general use in the schools in St. Helens, but it is impossible at this stage to estimate what their results are. Open air schools or school camps have not been in use in St. Helens.

Through the kindness of a local philanthropic society known as the Fresh Air Fund, it has been possible to send to Children's Convalescent Homes at seaside resorts, many delicate children discovered in the course of medical inspection ; altogether during 1908 14 children were sent away for varying periods up to six weeks, and in all cases marked improvement in their physical health ensued.

**Hygienic Conditions in Schools.**—From the great difference that exists in the schools in St. Helens, it is difficult to present a general review of the hygienic conditions prevalent in them. There are in the Borough six schools opened within the past few years, all of which, from the point of view of hygienic conditions are excellent ; on the other hand there are at least five schools presenting grave defects in their hygienic condition, not easily remedied. Generally the schools of St. Helens fall below the average of town schools in this respect, but the policy of the Education Committee in themselves building schools, is giving rise to great improvement all round. The requisite comprehensiveness for this part of the report has not been attained, all the inspections necessary not having been carried out, but it is hoped to complete them during the current year.

## TEACHERS.

**Examination of Scholarship Candidates.**—At the request of the Education Committee 40 candidates for these appointments were examined with respect to their general physical conditions. The following is a short summary of the result of the examination :—

CANDIDATES CLASSIFIED AS TO PHYSICAL CONDITION.

CLASS.		BOYS.	GIRLS.
Very Good	...	4	8
Good	...	3	11
Fair	...	2	8
Poor	...	—	4

The ages of these candidates were from fifteen to seventeen years.

The general physical condition of the boys was good, but as in previous years that of the girls was not so good. The number of these girls with vermin in their heads was 11. Visual defects were far too common and they were frequently gross in character and bound to be a serious handicap to the student if not causing an actual breakdown in training. The whole examination forms an excellent object lesson of the need for medical inspection of school children in St. Helens. Some of the conditions found among the girls especially, were such as ought not to exist among those purposing to devote themselves to teach the young. The results of the teaching of hygiene to children in public elementary schools is not likely to be very great by teachers who, at the beginning of their training, presented themselves for examination with heads infested with nits or with mouths to which a toothbrush is a stranger. These were found, of course, in a minority of the candidates, but surely they ought not to have been found in any.

**Miscellaneous.**—Proposed lectures to Public Elementary School teachers on hygiene and temperance have been under consideration by the Elementary Education Committee, and the Secretary of Education has been endeavouring to arrange for them to take place.

Under the regulation relating to teachers absent from duty, medical certificates were granted with respect to teachers who had been exposed to infectious disease in their homes.

**TABLE A. Accommodation for Medical Inspection in each School.**

NAME OF SCHOOL.	PLACE OF INSPECTION.	DESCRIPTION.	HEATING.	LIGHTING.	VENTILATION.	DISPLACEMENT OF CLASSES.	
						CLASSES.	CLASSES.
Windlesham R.C.	..	Mixed	Fire	Good	None.	None.	
St. Mary's C.E.	..	Mixed	Fire	Good	None.		
," York Street	..	{ Infants	Coke stove	Class displaced,	causing over crowding.		
Lowe House R.C.	..	{ Infants	None provided				
"	..	{ Girls	Fire	Class displaced.			
Windle	..	{ Boys	None provided	Class displaced.			
The Gerard R.C.	..	{ Infants	Coke stove	Class displaced.			
Laffak	..	{ Mixed	Coke stove	Class displaced.			
Christ Church Mission	..	{ Infants	Gas stove	Class displaced.			
St. Teresa's R.C.	..	{ All	Open fire	Class displaced,	causing over crowding.		
Knowsley Road Und.	..	{ Infants	Fair				
St. Thomas' C.E.	..	{ Girls	Good				
Cowley Council	..	{ Boys	Good				
," , ,		{ Boys	Good				
St. Patrick's R.C.		Infants	Good	Good	Good	Good	Good
St. Helens Und.		Mixed	Good	Good	Good	Good	Good
," , ,		Infants	Good	Good	Good	Good	Good
St. Helens Wesleyan		Girls	Good	Good	Good	Good	Good
Moor Flat		Boys	Good	Good	Good	Good	Good
Holy Cross R.C.		Mixed	Bad	Bad	Bad	Bad	Bad
Blackbrook R.C.		Infants	Bad	Bad	Bad	Bad	Bad
," , ,		Boys	Poor	Poor	Poor	Poor	Poor
St. Joseph's R.C.		Girls	Fair	Fair	Fair	Fair	Fair
Blackbrook R.C.		Infants	Fair	Fair	Fair	Fair	Fair
," , ,		Boys	Very bad	Very bad	Very bad	Very bad	Very bad
Gas stove		Girls	Gas stove	Gas stove	Gas stove	Gas stove	Gas stove

TABLE A.—Continued.

NAME OF SCHOOL.	DEPARTMENT.	PLACE OF INSPECTION.		HEATING.	LIGHTING.	VENTILATION.	DISPLACEMENT OF CLASSES.
		DESCRIPTION.					
Merton Bank Council	All Infants & Girls	Class-room		Pipes	Good	Good	Class displaced.
Parr Mount C.E.	Boys	Class-room fair size		Stove, coke	Fair	Fair	Class displaced, causing overcrowding.
St. Peter's C.E.,	Infants	Class-room fair size		Stove, coke	Fair	Fair	,
"	Mixed	Class-room rather small		Fire	Poor	Poor	,
Allanson Street Council	All	Infants cloak-room dirty		Pipes	Poor	Poor	,
Parr Flat C.E.	All	Teachers' room fair size		Fire	Good	Good	Class kept in.
St. Vincent's R.C.	All	Class-room good size		Fire	Good	Good	None.
,	,	Cloak-room very small. Vision tested by using Lavatory space in addition		Fire	Very bad	Very bad	Class displaced, causing overcrowding.
Marshalls Cross	Infants	Cloak-room small & very narrow		Draughty	Good	Good	None.
St. Anne's R.C.	Infants	Class-room large		Fair	Good	Good	Class displaced
,	Girls	Class-room large		Fire	Good	Good	,
Sutton C.E.,	Boys	Billiard room large		Coke fire	Poor	Poor	None.
,	Infants	Class-room large		Fire	Good	Good	Class sent to Parish Rooms.
,	Girls	Class-room large		Fire	Poor	Poor	Class displaced.
Peasley Cross Und.	Boys	" "		None	Fair	Fair	None.
Sutton St. Joseph's R.C.	Infants	Class-room fair size		None	Poor	Poor	Class displaced
"	Mixed	Class-room large		Gas Stove	Good	Good	,
Peasley Cross C.E.	Infants	Class-room fair size		Fire	Good	Good	Class displaced
"	Mixed	" large		Fire	Fair	Fair	,
Thatto Heath Council	Infants	Class-room fair size		Fire	Poor	Poor	Class displaced
St. Austins R.C.	Mixed	" ,		Coke stove	Poor	Poor	,
Nutgrove Wesleyan	All Infants & Girls	Teachers' room		Coke stove	Fair	Fair	Class displaced, causing overcrowding.
St. John's C.E.	Boys	Cloak room		Open fire	Good	Good	,
Ravenhead C.E.	Infants	Class-room large		Hot w. radiators	Poor	Poor	,
Sacred Heart R.C.	Mixed	" Partitioned off class-room, fair size		Coke stove	Good	Good	,
"	Infants	Class-room good size		Fire	Good	Good	,
"	Boys	" Cloak-room fair size but blocked with clothes racks		Fire	None	Dranghty	None.
	Girls	Cloakroom also blocked		None	Poor	Fair	Class displaced, causing overcrowding.
	Boys	Class-room good size		Pipes	Poor	Fair	,

**TABLE B.—Children examined in 1908.**

AGE. SEX.	3		4		5		6		7		8		9		10		11		12		13		14		Tl.
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Windlesham R.C. . .	..		8	6	—	4	2	1	—	—	1	1	2	1	—	3	—	—	3	5	4	—	1	42	
St. Mary's C.E. . .	..	1	9	10	12	18	13	2	4	4	—	—	—	—	—	—	—	—	3	18	19	3	3	119	
Lowe House R.C. . .	..	—	—	18	18	15	4	3	1	—	1	—	—	—	—	—	—	—	2	—	46	—	1	151	
Windle . . .	..	—	—	13	7	24	35	2	—	—	—	—	—	—	—	—	—	3	5	14	17	—	2	122	
The Gerard R.C. . .	..	—	—	10	15	7	4	2	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	40	
Laffak . . .	..	—	—	3	—	4	—	—	—	1	—	—	—	—	—	—	—	—	—	1	3	—	—	12	
Christ Church Mission . . .	..	—	—	—	—	6	12	17	17	—	—	1	—	—	1	2	13	9	8	14	1	—	—	102	
St. Teresa's R.C. . .	..	—	—	9	4	3	3	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13	—	33
Knowsley Road Und. . .	..	—	—	1	11	17	24	21	3	7	1	2	—	1	—	—	1	14	—	24	34	—	—	161	
St. Thomas' C.E. . .	..	1	—	20	23	25	21	6	2	1	—	—	—	—	—	—	—	8	4	14	23	—	1	149	
Cowley Council . . .	..	—	—	—	—	32	20	—	—	—	—	—	—	—	—	—	15	19	38	30	—	—	—	154	
St. Patrick's R.C. . .	..	—	—	1	2	18	14	7	3	4	—	—	—	2	5	—	4	—	3	10	—	1	—	74	
St. Helens Und. . .	..	—	—	16	12	21	8	—	—	—	—	—	—	—	—	—	11	4	14	20	—	—	—	106	
St. Helens Wesleyan . . .	..	—	—	4	2	7	6	—	2	—	—	—	—	—	—	—	11	5	17	6	—	—	—	66	
Moor Flat . . .	..	—	—	3	3	4	4	1	1	1	1	—	—	—	—	—	—	1	—	14	—	—	—	33	
Holy Cross R.C. . .	..	—	—	9	14	6	8	—	2	2	—	—	—	—	—	—	—	—	—	14	—	—	—	55	
St. Joseph's R.C. . .	..	—	—	18	10	8	16	2	2	1	2	—	—	—	—	—	—	—	—	—	13	2	—	74	
Blackbrook R.C. . .	..	—	—	6	5	5	4	1	1	2	1	—	—	—	—	—	10	16	16	6	—	—	—	73	
Merton Bank Council . . .	..	3	11	10	32	33	—	—	—	—	—	—	—	—	—	—	33	30	25	35	—	—	—	212	
Parr Mount C.E. . .	..	—	—	9	7	2	8	2	1	—	—	—	—	—	—	—	—	—	29	14	—	1	—	73	
St. Peter's C.E. . .	..	—	—	10	4	6	2	—	2	1	—	—	—	1	1	—	7	11	10	16	1	—	—	72	
Allanson Street Council . . .	..	—	—	4	3	26	26	—	—	—	—	—	—	—	—	—	30	24	15	17	—	—	—	145	
Parr Flat C.E. . .	..	—	—	—	—	8	10	1	1	—	3	—	—	1	1	—	—	—	—	—	—	—	—	25	
St. Vincent's R.C. . .	..	—	—	—	—	7	9	—	—	—	—	—	—	—	—	—	—	—	13	7	—	—	—	36	
Marshall's Cross . . .	..	—	—	4	6	4	6	—	2	1	—	—	—	—	—	—	—	—	—	—	—	—	—	23	
St. Anne's R.C. . .	..	—	—	10	21	13	16	1	—	2	—	4	—	2	2	1	—	2	24	17	—	1	—	116	
Sutton C.E. 1 . . .	..	—	—	—	—	39	19	3	2	—	2	—	—	—	1	—	35	1	37	30	—	1	—	170	
Peasley Cross Und. . .	..	—	—	9	14	7	8	—	1	1	—	—	—	—	—	—	5	3	10	14	—	—	—	72	
Sutton St. Joseph's R.C. . .	..	—	—	9	4	5	8	—	1	—	—	—	—	—	—	—	4	7	5	14	—	—	—	57	
Peasley Cross C.E. . .	..	—	—	12	3	11	8	—	1	1	2	—	—	—	—	—	7	5	6	7	—	2	—	65	
Thatto Heath Council . . .	..	—	—	—	—	12	22	—	—	—	—	—	—	—	—	—	25	17	21	15	—	—	—	112	
St. Austin's R.C. . .	..	—	—	7	10	6	3	2	—	—	—	—	—	—	—	—	5	—	5	7	—	—	—	45	
Nutgrove Wesleyan . . .	..	—	—	8	7	15	15	—	—	—	—	—	—	—	—	—	—	1	13	21	—	—	—	80	
St. John's C.E. . .	..	—	—	2	4	3	3	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15	
Ravenhead C.E. . .	..	—	—	7	14	1	4	—	1	1	—	—	—	—	—	—	—	—	19	6	—	—	—	53	
Sacred Heart R.C. . .	..	—	—	1	—	16	30	1	—	—	—	—	—	—	3	1	19	6	58	37	—	1	—	173	
	2	13	262	257	440	427	59	57	23	14	6	6	2	4	4	6	12	4	261	176	522	525	5	17	3104

**TABLE C.—Average Height and Weight of Children Inspected.**

Height in inches ; Weight in lbs.

Name of School.	4 to 5 yrs.		5 to 6 yrs.		12 to 13 yrs.		13 to 14 yrs.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
WINDLESHAW R.C. H W	37·97	38·25	—	42·06	—	55·58	56·25	57·00
	35·53	38·10	—	40·62	—	79·33	77·60	77·90
ST. MARY'S C.E. H W	37·22	37·10	39·40	38·06	—	55·66	56·60	56·38
	33·05	32·00	36·24	33·36	—	79·83	78·60	78·00
LOWE HOUSE R.C. H W	37·61	37·59	40·03	39·39	—	—	54·00	56·29
	35·22	34·26	39·00	37·75	—	—	73·50	76·71
WINDLE H W	38·73	39·25	40·81	39·26	53·16	55·45	55·28	57·10
	37·44	37·28	40·05	36·61	67·08	73·70	74·61	81·77
THE GERARD R.C. H W	36·97	37·30	38·07	38·06	—	—	—	—
	34·70	34·11	36·07	35·40	—	—	—	—
LAFFAK H W	39·50	—	39·94	—	—	—	57·50	58·50
	37·00	—	34·40	—	—	—	78·00	81·50
CHRIST CHURCH MISSION H W	—	—	39·60	40·75	53·67	56·08	55·81	56·25
	—	—	35·66	39·42	71·00	76·77	80·28	72·70
ST. TERESA'S R.C. H W	37·50	35·62	40·25	40·25	—	—	—	54·59
	32·69	31·19	37·66	40·00	—	—	—	74·61
KNOWSLEY ROAD UND. H W	38·57	38·65	40·35	40·10	53·62	—	56·53	56·16
	39·66	37·51	39·73	38·60	70·20	—	79·25	77·15
ST. THOMAS' C.E. H W	37·96	38·06	39·23	38·62	55·06	53·50	54·84	55·22
	34·36	32·64	35·96	34·08	68·78	70·25	70·20	75·95
COWLEY COUNCIL H W	—	—	40·51	40·34	56·22	55·34	56·17	56·58
	—	—	38·06	38·51	73·28	74·88	77·05	76·67
ST. PATRICK'S R.C. H W	39·00	36·75	39·35	40·25	53·19	—	52·25	55·10
	38·00	34·00	37·75	37·75	71·75	—	73·33	79·72
ST. HELENS UND. H W	37·90	37·92	39·21	37·91	54·10	54·12	55·52	55·20
	36·10	37·10	38·01	36·20	71·32	68·50	77·36	75·62
ST. HELENS WESLEYAN H W	38·40	40·00	39·96	38·16	53·20	55·25	55·82	57·66
	36·50	38·00	37·57	33·66	68·28	69·90	77·00	78·41
MOOREFLAT C.E. H W	36·00	37·75	39·70	39·44	—	55·00	—	57·00
	30·33	34·66	38·25	35·81	—	72·00	—	80·00
HOLY CROSS R.C. H W	38·75	37·05	38·96	38·47	—	—	55·27	—
	36·72	34·25	36·75	34·97	—	—	59·04	—
ST. JOSEPH'S R.C. H W	38·10	39·05	41·00	38·35	—	—	—	55·21
	36·75	34·70	40·50	34·35	—	—	—	71·00
BLACKBROOK R.C. H W	38·50	37·40	39·12	39·69	54·55	54·66	54·16	54·58
	34·83	34·20	36·80	34·87	70·65	73·00	79·69	78·04

**TABLE C.—***Continued.*

Name of School.	4 to 5 yrs.		5 to 6 yrs.		12 to 13 yrs.		13 to 14 yrs.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
MERTON BANK COUNCIL { H W	39·05 36·14	37·12 35·17	40·34 38·58	39·30 35·35	53·30 67·33	53·00 69·38	54·36 74·36	56·00 80·00
PARR MOUNT C.E. { H W	38·14 36·80	37·61 34·71	39·88 36·12	37·56 35·72	— —	— —	55·53 77·23	55·82 73·20
ST. PETER'S C.E. { H W	38·45 36·50	37·44 33·44	38·58 35·41	40·62 39·37	54·71 74·00	53·23 69·64	55·62 82·90	56·36 80·60
ALLANSON ST. COUNCIL { H W	39·12 35·94	37·2 36·5	39·20 37·91	39·58 37·60	53·25 69·38	52·80 68·44	55·75 75·63	54·95 75·47
PARR FLAT C.E. { H W	— —	— —	39·59 37·88	39·00 37·65	— —	— —	— —	— —
ST. VINCENT'S R.C. { H W	— —	— —	38·68 36·36	40·08 39·94	— —	— —	54·96 76·87	56·96 82·00
MARSHALL'S CROSS { H W	39·56 38·19	39·66 37·62	41·50 40·00	39·37 36·21	— —	— —	— —	— —
ST. ANN'S R.C. { H W	39·25 37·55	38·22 36·71	39·98 39·40	39·03 37·00	— —	— —	54·70 74·35	57·03 84·01
SUTTON C.E. { H W	— —	— —	40·41 38·49	40·01 38·54	53·91 67·81	— —	55·00 70·41	56·45 79·80
PEASLEY CROSS UND. { H W	39·40 39·00	37·12 34·10	39·43 38·71	38·72 35·75	53·75 73·80	55·08 74·00	54·75 72·25	53·43 88·15
SUTTON ST. JOSEPH'S R.C. { H W	38·44 36·02	38·62 37·50	39·35 36·20	38·87 39·28	54·12 77·25	55·18 80·64	53·50 72·75	55·44 80·68
PEASLEY CROSS C.E. { H W	39·25 38·83	37·33 34·25	38·70 37·25	40·56 38·00	52·53 72·30	52·53 66·70	54·54 75·16	57·14 84·43
THATTO HEATH COUNCIL { H W	— —	— —	39·66 36·81	40·57 38·41	53·34 69·77	53·43 69·43	55·22 76·51	55·55 76·55
ST. AUSTIN'S R.C. { H W	37·75 32·57	38·05 33·17	38·96 37·88	38·42 33·92	55·50 75·40	— —	57·40 80·20	58·14 76·14
NUTGROVE WESLEYAN { H W	39·53 34·72	38·50 34·44	39·64 35·30	40·58 37·00	— —	— —	55·67 73·00	56·80 75·20
ST. JOHN'S C.E. { H W	39·37 34·25	37·24 31·38	39·66 32·50	36·66 26·92	— —	— —	— —	— —
RAVENHEAD C.E. { H W	39·32 34·96	38·69 32·27	38·5 40·00	39·25 34·75	— —	— —	55·01 73·09	57·00 81·42
SACRED HEART C.E. { H W	— —	— —	40·53 38·81	38·82 36·24	53·16 71·92	53·96 71·62	54·43 71·10	55·28 75·57

**TABLE D.—Defects noted in Children examined.**

NATURE OF DEFECT.	DEPARTMENT.	TEETH.												EAR DISEASE.				DEFECTIVE VISION.	
		Infants				All Sound.				4 or more Decayed.				Infants		Enlarged Tonsils.		Infants	
		Insufficient Clothing.	Mixed			Infants	Mixed			Infants	Mixed			Adenoids.					
Windleshaw R.C.	.. ..	1	—	1	—	3	2	—	—	2	—	—	—	2	2	4	—	—	—
St. Mary's C.E.	.. ..	1	10	16	2	32	6	16	11	19	16	—	—	4	4	5	—	3	7
Lowe House R.C.	.. ..	4	13	2	6	3	12	15	20	20	20	—	—	—	—	—	—	—	9
Windle	.. ..	1	4	4	8	3	3	12	25	10	19	12	—	—	—	—	—	—	—
The Gerard R.C.	.. ..	1	15	—	—	5	—	—	8	—	13	—	—	—	—	—	—	—	—
Laffak	.. ..	2	—	1	1	3	4	3	40	27	22	16	—	—	—	—	—	—	1
Christ Church Mission	.. ..	1	1	1	1	3	—	—	—	—	—	—	—	—	—	—	—	—	3
St. Teresa's R.C.	.. ..	1	4	9	3	1	5	2	4	4	4	5	—	—	—	—	—	—	14
Knowsley Road Und.	.. ..	1	16	21	6	3	19	17	42	21	29	19	—	—	—	—	—	—	14
St. Thomas' C.E.	.. ..	3	1	5	8	7	3	39	7	20	13	30	15	—	—	—	—	—	14
Cowley Council	.. ..	11	29	11	2	10	7	30	35	21	36	—	—	—	—	—	—	—	18
St. Patrick's R.C.	.. ..	2	29	11	12	2	10	1	17	17	27	11	—	—	—	—	—	—	10
St. Helens Und.	.. ..	3	1	16	6	1	22	7	14	8	13	17	—	—	—	—	—	—	6
St. Helens Wesleyan	.. ..	4	7	4	3	2	9	4	7	14	6	10	—	—	—	—	—	—	9
Moorflat C.E.	.. ..	1	2	2	11	1	1	3	2	12	3	4	3	—	—	—	—	—	1
Holy Cross R.C.	.. ..	1	2	2	2	6	3	17	2	11	6	8	2	1	1	—	—	—	4
St. Joseph's R.C.	.. ..	7	4	3	14	11	—	30	3	14	7	4	3	2	—	—	—	—	5
Blackbrook R.C.	.. ..	1	2	5	11	1	7	10	7	8	9	6	15	3	2	—	—	—	7
Merton Bank Council	.. ..	5	9	38	15	1	4	37	25	13	12	36	44	8	8	4	—	—	30
Parr Mount C.E.	.. ..	2	2	9	7	5	5	7	6	14	8	18	—	—	—	—	2	1	9
St. Peter's C.E.	.. ..	2	2	14	—	3	2	4	17	21	7	23	—	1	3	—	1	—	6
Allanson Street Council	.. ..	1	2	16	34	1	6	15	7	21	38	31	36	8	6	5	4	2	13
Parr Flat C.E.	.. ..	—	6	—	2	—	4	—	10	—	8	—	—	1	—	—	—	—	—
St. Vincent's R.C.	.. ..	1	3	4	1	—	2	—	1	5	8	6	9	3	1	2	—	—	1
Marshall's Cross	.. ..	—	—	—	2	—	1	—	11	—	9	—	—	1	—	—	—	—	—
St. Ann's R.C.	.. ..	2	3	6	11	2	3	9	5	23	19	19	20	1	8	2	—	—	7
Sutton C.E.	.. ..	3	3	8	11	—	7	10	15	39	44	26	37	7	9	5	3	1	20
Peasley Cross Und.	.. ..	1	6	6	1	1	9	3	10	16	13	14	1	1	1	1	—	2	5
Sutton St. Joseph's R.C.	.. ..	1	6	11	3	5	13	8	6	5	5	11	—	—	—	—	—	—	8
Peasley Cross C.E.	.. ..	2	—	—	3	11	3	12	6	13	15	—	—	1	1	—	1	—	2
Thatto Heath Council	.. ..	1	15	26	2	2	12	15	2	7	10	36	—	4	13	2	2	2	8
St. Austin's R.C.	.. ..	—	1	2	3	2	11	5	5	5	10	6	—	2	2	1	—	—	6
Nutgrove Wesleyan	.. ..	1	25	1	—	1	14	5	25	9	13	6	—	—	—	—	1	—	5
St. John's C.E.	.. ..	—	2	—	—	9	—	3	—	5	—	—	—	1	1	1	—	—	5
Ravenhead C.E.	.. ..	—	2	4	2	—	9	3	19	21	6	4	—	2	1	—	3	—	3
Sacred Heart R.C.	.. ..	9	20	47	2	18	12	13	17	54	22	53	10	14	1	1	5	—	32
		37	73	276	366	107	106	433	204	534	488	493	546	104	116	52	39	46	267